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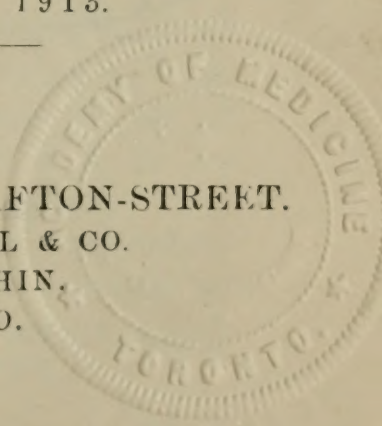
THE
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OF
MEDICAL SCIENCE.

EDITED BY
SIR JOHN W. MOORE, M.A., M.D., M.Ch. DUBL., D.Sc. Oxon.,
PAST-PRESIDENT OF THE ROYAL COLLEGE OF PHYSICIANS OF IRELAND,
SENIOR PHYSICIAN TO THE MEATH HOSPITAL AND COUNTY DUBLIN INFIRMARY,
CONSULTING PHYSICIAN TO CORK-STREET FEVER HOSPITAL,
EX-SCHOLAR AND DIPLOMATE IN STATE MEDICINE
OF TRINITY COLLEGE, DUBLIN.
HONORARY PHYSICIAN IN ORDINARY TO H. M. THE KING IN IRELAND;
and
T. GILLMAN MOORHEAD, B.A., M.D. DUBL.,
FELLOW OF THE ROYAL COLLEGE OF PHYSICIANS OF IRELAND,
PHYSICIAN TO THE ROYAL CITY OF DUBLIN HOSPITAL,
CONSULTING PHYSICIAN TO THE CLONSKEAGH FEVER HOSPITAL,
DIPLOMATE IN STATE MEDICINE.

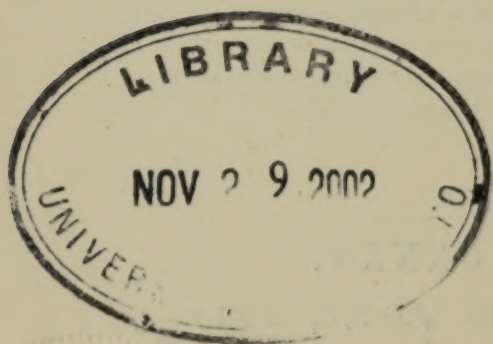
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JANUARY 1, 1913.

PART I.

ORIGINAL COMMUNICATIONS.

ART. I.—*The Röntgen Rays in Medical Diagnosis.*^a By
W. GEOFFREY HARVEY, M.D. Univ. Dubl., F.R.C.P.I. ;
Assistant Physician, and Physician in charge of the X-ray
Department, Adelaide Hospital, Dublin. (Illustrated.)

THE uses of the Röntgen rays are by no means novel to this Association. Professor Thompson alluded to their use in physiological investigations in his opening address. Mr. Haughton devoted his Presidential Essay to this new gift to surgery of a probe—"painless, accurate and aseptic"; while only last year your outgoing President and Mr. Thomson Walker demonstrated the many uses of the rays in genito-urinary surgery.

The object of this paper is to deal with Röntgen diagnosis rather from the physician's standpoint, omitting from consideration all such purely surgical cases as are of traumatic origin, and all tumours, except in so far as for diagnosis they fall within a physician's sphere.

Moreover, I confine my remarks to disease in the chest and abdomen, and consequently make no reference to

^a Presidential Essay read at the opening meeting of Dublin University Biological Association, Trinity College, November 23, 1912.

the well-known application of radiography to rheumatism and arthritis, or to such special subjects as dentistry and ophthalmology.

There are two methods of examining a patient with *x*-rays :—1st, with the screen; 2nd, with a photographic plate.

These two methods—screen and plate—have each their advantages and their drawbacks. Examining with the screen one can move the patient about until the best position for the required view is obtained, and—more important still—one can observe the movements of the patient. His respiratory motions can be examined, his heart beat or the pulsations of the large vessels can be observed, and the movements of his digestive organs can be brought to light.

On the other hand, we can undoubtedly get greater wealth of detail on a negative as—*e.g.*, when a small crack in a bone, invisible upon the screen, may be clearly defined on the plate. Moreover, the plate gives us a permanent record with the necessary leisure and “appropriate calm” to examine an impression made “of one short moment caught from fleeting time.”

X-ray diagnoses of the kind with which I have to deal have mostly to be made by screen examinations. The lantern slides made from radiographic negatives will, I hope, tend to make my explanations of these diagnostic methods intelligible. It must be understood that they are very often in themselves insufficient for the diagnosis.

The chest or thorax contains the lungs and air passages, the gullet or œsophagus leading down to the stomach, and the heart and its large vessels. All these are capable of radiographic examination.

I will deal first with the lungs.

On the screen the chest, viewed from the front, presents two bright areas with a dark shadow in the centre. The dark shadow is thrown by the vertebræ (back bone) behind, the sternum (breast bone) in front, and by the heart and aorta centrally.

PLATE I.

DR. W. G. HARVEY on "Rentgen Rays in Medical Diagnosis."

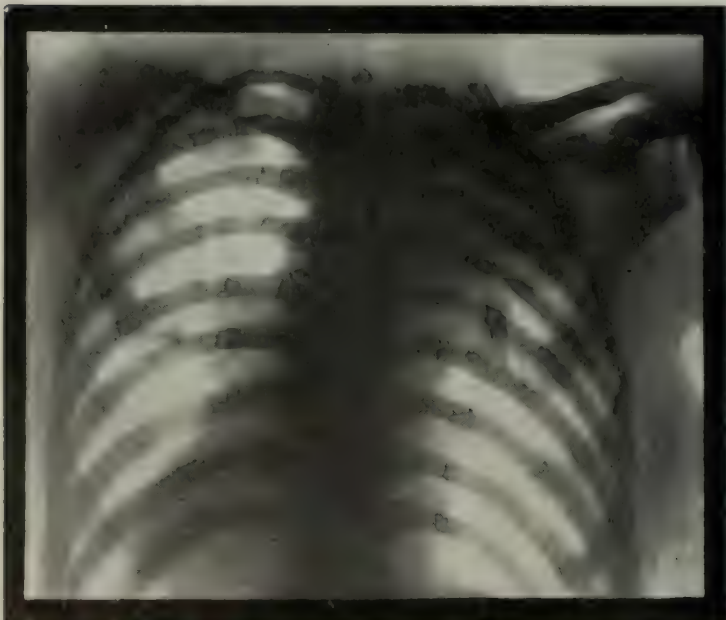


Left)

FIG. 1.

[Right

Bilateral phthisis. Note the mottled upper lobes. The centrally placed "drooping" heart shadow is characteristic.



Left)

FIG. 2.

[Right

Phthisis of right upper lobe. Note how the ribs have closed in over the affected area.

In health these two bright areas are symmetrical, save that the heart shadow encroaches more on the left. They present a homogeneous bright field latticed over by the rib shadows, and as the patient inspires we see the ribs rise, their interspaces widen, and both fields "light up" all over in an even and regular manner. At the same time the domes of the diaphragm are seen to plunge downwards like two pistons, not as the older physiologists taught, contracting from segments of circles to form their arcs.

Now let us consider how the diagnosis of lung trouble may be bettered by a Röntgen examination.

First, let me insist on two points—(1) that such examination should never be regarded as a short cut to diagnosis. Radiographic findings must be interpreted in the full light of clinical signs and symptoms. I believe them, indeed, to be in many cases more valuable and accurate than either percussion or auscultation. But who would base his diagnosis on information received from either his stethoscope or percussing finger alone? Why then isolate radiography? (2) I am not concerned here with all that the rays can show, albeit with difficulty, where other means can more easily or more accurately fulfil our requirements. I wish to deal with cases where *x*-rays may prove a real and valuable help.

In few diseases is it more important to make an early and certain diagnosis than in phthisis, or consumption. Let us first consider the use of radioscopy in this disease.

Such portions of lung tissue as are infiltrated with the disease become solidified and airless, and appear on the screen as darkened areas or spots, giving a mottled appearance to that portion of the lung. Should caseation ensue the shadow thrown is darker than before. A cavity, unless filled with fluid, will show us an over-bright area surrounded by shadow. In screen examination in the upright position, the horizontal shadow of the fluid in a half-filled cavity is frequently observed; over these inexpandive solidified areas, the ribs are often seen motion-

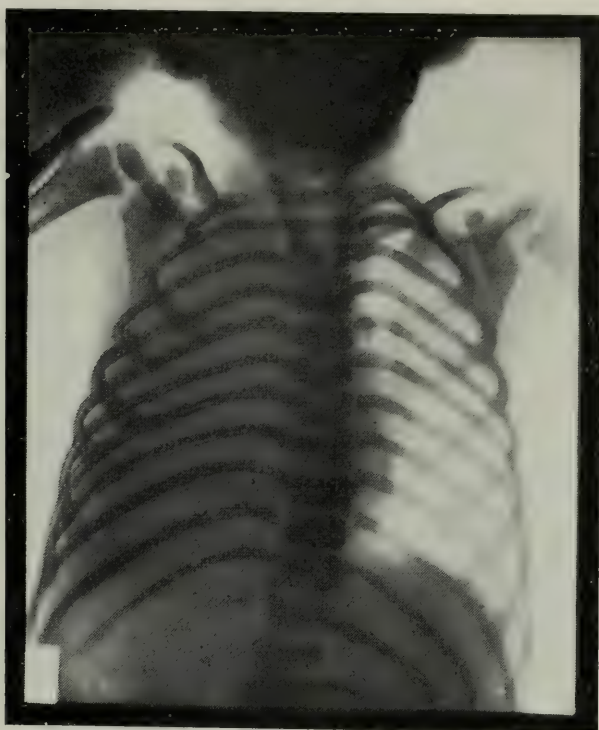
less during respiration, and perhaps "fallen in" or closer in their spacing than elsewhere. (Plate I., Figs. 1 and 2.)

Now I believe that in these ways, radioscopy gives us a more accurate picture of the condition of the disease than can be obtained by auscultation and percussion, but it is in the very early stages before such gross changes have supervened that I conceive the rays to be most useful. I have examined a great many early cases. Often at first glance the lung areas appear transparent and homogeneous, but on getting the patient to inspire, some area or spot will be noticed to fail to "light up" quite as much as the rest, and careful examination may show a diminished expansion of the rib spaces. Instead of the smooth plunge of the diaphragm its movements may be jerky or irregular, or as Dr. Barclay aptly describes it "stammering" in type. Sometimes, too, a most striking appearance may be noticed. The diaphragm on the affected side may be motionless or its range greatly diminished, while its fellow on the healthy side performs a full excursion. There has been much controversy about this sign. I have constantly observed it, and much more frequently in very early than in advanced cases. I have also frequently seen it disappear in cases where other signs of the disease were advancing. My own opinion is that it is an eminently useful sign when present. I regard its absence as of absolutely no importance.

Now, "sinking in" or "roof tiling" of the ribs and lack of movement with respiration are signs which we look for by clinical inspection and palpation, but I am convinced that they can be recognised with greater accuracy by radioscopy.

Small tuberculous areas, when superficial, may be detected by clinical means, but tuberculosis does not usually commence superficially, nor at the apices. I believe its commonest starting point to be deep in the upper lobe near the root of the lung—a difficult position for finger or stethoscope.

Emphysema, too, may mask tuberculosis to percussion



Left]

FIG. 3.

[Right

Left-sided pleural effusion (child). Note the increased width of left side and the homogeneous shadow with equal rib spaces. The heart is slightly displaced towards the right side.



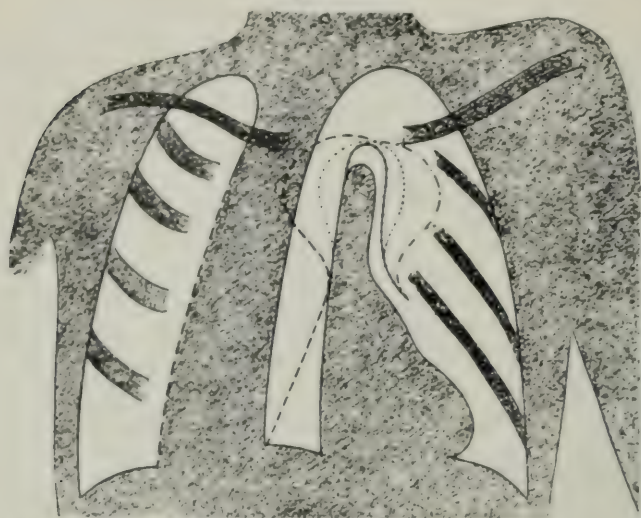
Left]

FIG. 4.

[Right

Fibrosis of left lung. Compare with Fig. 3. Note the uneven shadow and sunken rib spaces.

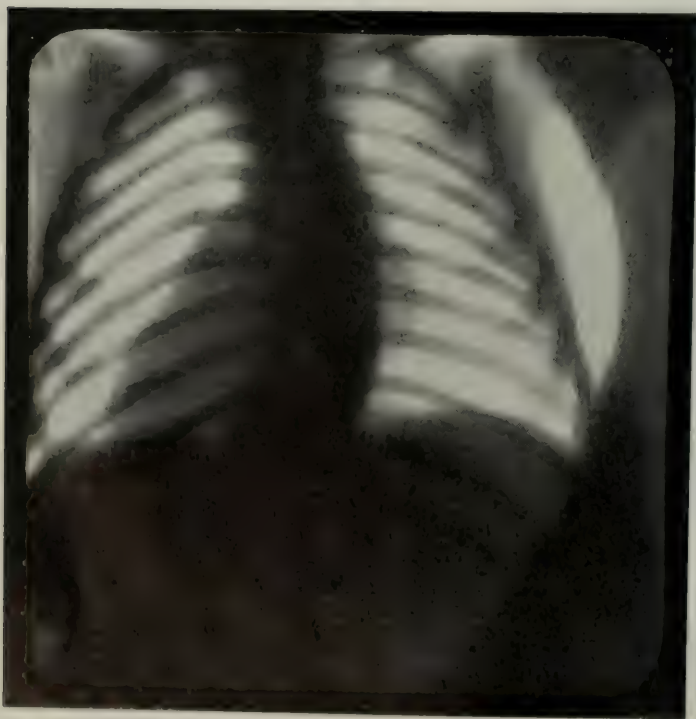
DR. W. G. HARVEY on "Röntgen Rays in Medical Diagnosis."



Right | FIG. 5. | Left

Diagram of the "half-left" position as seen on the screen (after Holzkecht). From right to left we see :—

- (1) The right chest wall.
- (2) A clear area—the right lung space.
- (3) The vertebral column.
- (4) A clear space in which the œsophagus, &c., lie.
- (5) The heart and aortic shadows.
- (6) Left lung space.
- (7) Left chest wall.



Left | FIG. 6. | Right

Dilated œsophagus (after a bismuth meal). There was a spasmodic stricture of the cardiac end. The "tapering" constriction at the level of the dia-

and auscultation ; it helps us in radioscopy by brightening the surrounding field.

Again, *x-ray* examination may be of much value in accurately gauging the extent of the trouble. Frequently in cases supposed to be unilateral we find unmistakable evidence of disease in the other lung.

I have found one great difficulty in tuberculous cases—viz., to distinguish by radioscopy between an old quiescent fibrous lesion and an active focus. I am glad to find that others with large experience, including Dr. Barclay in his recent text-book, have recognised this as a difficulty. Here clinical symptoms are our best guide.

Clinically we sometimes have difficulty in distinguishing between a pleural effusion and a greatly thickened pleura. Here I think radioscopy may often help us. In the former the shadow is more homogeneous, the rib spaces are regular, while no “lighting up” takes place on inspiration. (Plate II., Fig. 3.) In the latter, the rib spaces are often sunken from fibrosis, but irregular “lighting up” can be observed, while very slight displacements of the heart by fluid or retraction are noticeable on the screen. (Plate II., Fig. 4.)

In solidification of the lung a bright angular area may be observed between the diaphragm and lower ribs—viz., the lower limit of the pleural sacs below the lowest point of the lung. This at once differentiates from effusion, which be it ever so small will obliterate this space.

Again, where clinical symptoms of abscess are present, the position of the diaphragm and condition of the lung as shown by radioscopy may materially assist us to differentiate at once between a thoracic and a hypophrenic abscess.

Pneumothorax gives us a most striking picture, with its greatly increased transparency, its absence of lung shadow save where the shrunk lung lies near the middle line, and its depressed diaphragm ; but nothing in radioscopy is more remarkable than a hydro- or pyo-pneumothorax. The dark shadow of the fluid is in strong contrast with the over-bright air space above. The line of

demarcation between the two is strictly horizontal, and varies with every movement of the patient, while, on shaking or moving the patient, drops may be seen forming on the pleural surface and forming eddies as they fall on the surface of the fluid below.

Tumour in the lung may often be readily diagnosticated from its general massive appearance, and this, too, sometimes when clinical symptoms are slight. I once had to make this diagnosis in the case of an unfortunate patient who had been sent to me on account of a trivial accident. There was no suspicion of serious trouble and no symptom other than pain, which was attributed to a fall. There were large tumour masses in his chest, which shortly afterwards gave rise to symptoms and the patient died within three months.

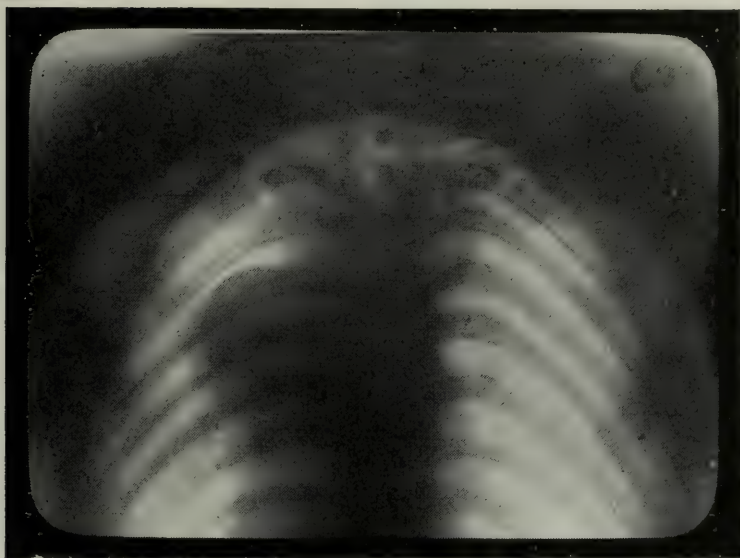
The œsophagus in the antero-posterior position is hidden by the sternal and aortic shadows in front and the vertebral behind. By turning the patient to the left, the sternal and aortic shadows pass leftwards on the screen, the vertebral towards the right. As the aortic and vertebral shadows separate a more transparent space is left between them, in which the œsophagus lies. (Plate III., Fig. 5.) Foreign bodies, such as coins, can easily be seen in this position. Where the foreign body is transparent to x-rays an opaque salt, such as bismuth carbonate, may mark its position, as on being swallowed it is held up by the obstacle.

Similarly a bismuth meal of, *e.g.*, carbonate of bismuth in porridge, or a suspension of the salt swallowed may locate a stricture in the gullet, be it caused by spasm, pressure from without, or a lesion of the wall. (Plate III., Fig. 6.) In many cases we are able to observe the cause as, *e.g.*, an aneurysm pressing on the œsophagus, or the picture may suggest malignant ulceration; in either case warning us to avoid a possibly disastrous use of a bougie or the œsophagoscope. The existence of an œsophageal pouch can be demonstrated in this manner.

Much can be determined as to the shape, size and action

PLATE IV.

DR. W. G. HARVEY on " Röntgen Rays in Medical Diagnosis."



Left]

FIG. 7.

[Right

Aortic aneurysm. Tumour is seen bulging from the left side of the aortic-vertebral shadow.

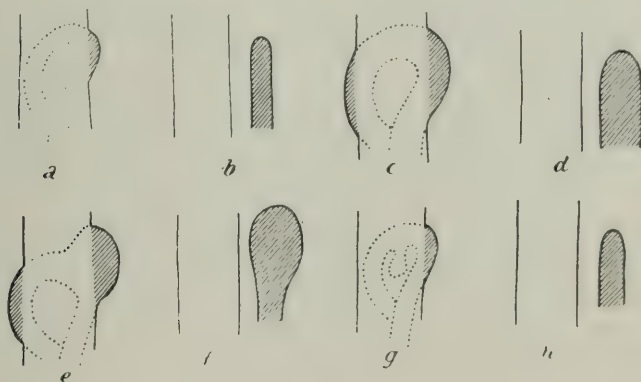


FIG. 7A.

(a) The normal aorta as seen from in front. The parallel lines represent the vertebral shadow; the dotted portion is therefore invisible.

(b) Same seen in " half-left " position. Aorta appears as a dark ribbon with parallel sides.

(c) Dilated aortic arch (from front).

(d) Same in " half-left " position. Aorta ribbon like, therefore no aneurysm.

(e) Aortic aneurysm (from front). N.B.—Has appearance identical with (c).

(f) Same from " half-left," has bulbous shape.

(g and h) Small aneurysm from under surface of arch. The only form which cannot be detected by x-ray examination.



Right] FIG. 8. [Left
Stomach after fairly large bismuth meal. Note air space above and tubular shape, lowest point level with umbilicus.



Right] FIG. 9. [Left
Dilated and atonic stomach after bismuth meal. Umbilicus (marked by grain of shot) lies above stomach shadow. Cardiac portion retains no bismuth.

of the heart, and Groedel and others have made extensive use of radioscopy in this respect, but the subject is too technical and its advantages over ordinary clinical methods too detailed to enter upon here. It may be said, however, in passing, that a pericardial effusion can easily be distinguished from an enlarged heart, as in the latter case the right ventricle forms an acute angle with the diaphragm—the cardio-hepatic angle—while in effusion, the angle becomes obliterated.

Cases of heart block can be examined radioscopically. Unfortunately, I have had the opportunity of examining only one case in which such a condition was suspected. Moreover the case was labelled as being an extremely doubtful one from a clinical standpoint. In this case I could clearly see a single slow auricular beat corresponding to each beat of the ventricle, thus proving the supposed condition not to exist.

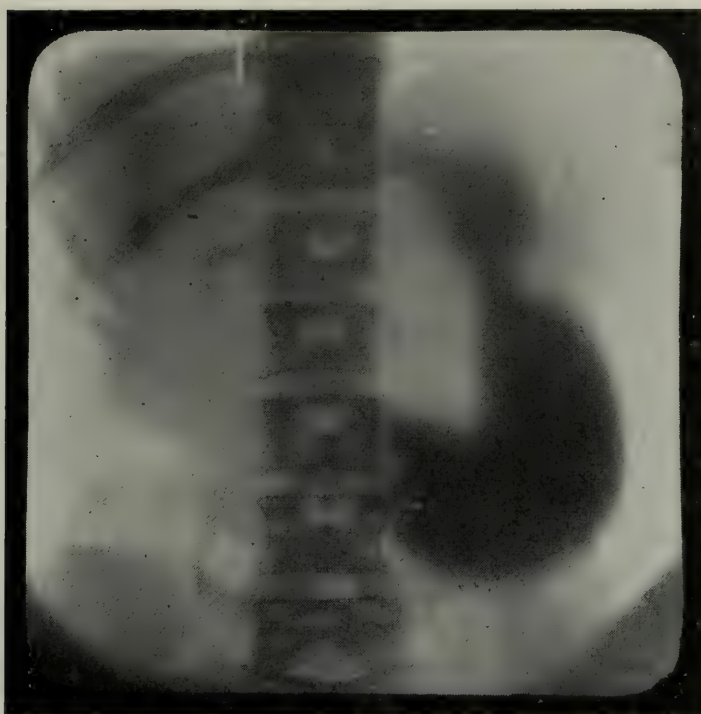
The aorta is particularly well studied by *x*-rays, and here let me say that the principles of Röntgen examination for aortic aneurysm are, I believe, in no way altered from those originally laid down many years ago by Guido Holzknecht, of Vienna, under whom I had the privilege of studying. He it was who—a pupil of Nothnagel, and himself a clinical observer of no mean degree—first laid down that a bulging of the aorta as seen in the antero-posterior direction might or might not be an aneurysm, and first enunciated the method of differentiation. I reproduce his own diagrams. (Plate IV., Figs. 7 and 7A.)

The abdomen is the field in which *x*-rays will eventually, if they have not yet done so, prove of greatest value to medical and surgical diagnosis in investigating the digestive and genito-urinary tracts. Already the work of Holzknecht, Haudek, Haenisch and Lester Leonard abroad; and in our own country that of Hertz, Morton, Holland, Jordan, Barclay and many others have done much to illuminate by Röntgen methods the path of the diagnostician in this dark region where all too often we lose our way.

The abdomen is in general more opaque to the rays than is the thorax. Moreover the viscera are more uniform in their density and consequently do not give the same contrasted picture as those of the chest. For abdominal examination the patient must be prepared for some days previously, by purgation, enemata, and suitable diet, &c.

Now, if we are examining the stomach—the patient facing us in the upright position—we see practically nothing at first of the outline of this organ, save a small light patch under the left lobe of the diaphragm which represents air contained in the stomach. However, on getting the patient to take a “bismuth meal” we see the dark shadow of the bismuth passing into the viscus and soon the latter is outlined in its normal shape, size and position. Its appearance is that of the letter “J” lying to the left of the middle line, vertical in form and reaching from the diaphragm above to the level of the umbilicus below. The curl of the “J” then turns to the right, the pylorus lying a little above the umbilicus and a little to the right of the middle line. The bismuth does not all fall to the bottom of the stomach, but the latter embraces its meal and presents a tubular form. As more food is given the tube is widened. The air space appears now as a segment of a circle determined by the arched dome of the diaphragm above, and the horizontal line of the bismuth below. (Plate V., Fig. 8.)

Now, as we watch the stomach shadow carefully, we can observe peristaltic movements passing down from cardia to pylorus, at which point they are more forcible. We can judge then, of the shape, size, position, tone, and peristaltic action of the stomach. We can observe, too, how long the food takes to pass completely out of the stomach. Moreover, we may judge of the acidity of its contents in at least two ways—(1) by administering a dose of bicarbonate of sodium and noting the increase in gas content in the stomach (Barclay), or (2) by a special fibrodermic capsule of bismuth (Schwarz). This will



Right] FIG. 10. [Left
Hour-glass stomach. The contraction, which was
spasmodic, relaxed on manipulation of abdominal
walls.



Left] FIG. 11. [Right
Hour-glass stomach (organic stricture). The large
shadow represents upper pouch. Some bismuth can
be seen below in lower sac.

PLATE VII.

DR. W. G. HARVEY ON "Röntgen Rays in Medical
Diagnosis."



Left] FIG. 12. [Right
Large intestine as seen after bismuth meal.



Left] FIG. 13. [Right
Ptosis of transverse colon. Umbilicus marked by
grain of shot. Transverse colon descends low into
the pelvis.

preserve its form until the coating is dissolved. If this does not occur within five hours there is lack of acid digestive secretions ; or, of course, acidity may be determined by ordinary clinical methods.

Now let us consider how abnormalities are to be detected.

Atony may be diagnosticated when the stomach fails to contract on its meal. The bismuth consequently falls in a heap to its lowest part outlining only its lower border, which from dilatation will often be well below the level of the umbilicus. (Plate V., Fig. 9.) When, on the other hand, the tonic action is retained and an elongated tubular stomach is seen to reach down to too low a level rising again sharply to the pylorus, gastropstosis without dilatation may be recognised.

The stomach may, on the other hand, appear to be too short, perhaps somewhat globular in form, and tucked up under the diaphragm. Such a picture is often due to the meal not reaching the pyloric end, as in hour-glass contraction. In other cases, the full shape of the "hour-glass" may be observable. (Plate VI., Figs. 10 and 11.)

This "hour-glass" condition is well known to pathologists as occurring at *post-mortems* either as the result of spasm or of a true organic stricture. As in the former case, on handling the organ the condition disappears, so, at a screen examination, we may be able by massaging the abdomen to cause the hour-glass shape to vanish, thus proving the stricture to be spasmodic in character. An organic narrowing will, of course, remain unaffected.

A good deal of information may be acquired in these cases by pressure on the abdominal walls either by the hand, or much better by a wooden spoon, as suggested by Holzknicht.

It is extremely important to observe how long the stomach takes to empty itself. If a stomach apparently normal in position, shape and tone fails to expel its contents in six hours we may conclude that pyloric obstruction exists. If in addition we find an absence of

acid secretion, we are the more certain of the obstruction, for the stomach when deficient in acid empties sooner, and we can make the diagnosis of a small scirrhus tumour at the pylorus with reasonable certainty.

The medullary or cauliflower growths in the stomach may be diagnosticated from the defect which they cause in the gastric shadow, together with the absence of HCl. Haudek claims that the shape of the stomach is sufficient to allow us to decide whether the tumour is or is not operable.

Gastric ulcers have been diagnosticated from the fact of the bismuth sticking to the ulcerated surface after it has left the rest of the stomach. Such appearances are however not constant, though in the adherent penetrating forms Haudek has observed the bismuth lodging in the burrows of the ulcers. Holz knecht lays stress on finding a sensitive pressure point, at the same time observing radioscopically that the tender spot moves with the stomach when the abdominal walls are pressed upon.

Such manipulation requires a high degree of skill, and it must not be forgotten that the clinical symptoms and history are to be carefully weighed with the radioscopic findings.

Similar appearances and signs have been observed in the duodenum in cases of duodenal ulcer.

In the small intestine the bismuth is not easily seen as it passes quickly along and soon becomes disseminated. However, where obstruction occurs from kinking, spasm or other cause the portion of intestine immediately above the obstruction is quickly rendered visible.

Dr. Jordan has shown some most interesting radiographs to prove the importance of kinking, chiefly at the junction of the duodenum and ileum and again near the ileo-cæcal junction (Lane's ileal kink).

There can be no doubt as to the extreme importance of his observations, though their precise interpretation is still a matter of some controversy.

Coming to the large intestine, we find the bismuth meal

PLATE VIII.

DR. W. G. HARVEY on " Röntgen Rays in Medical
Diagnosis."

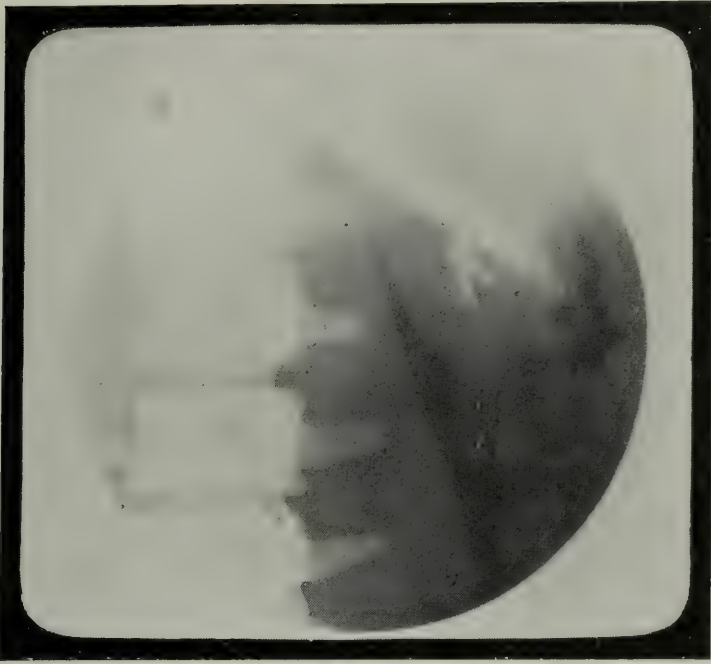


FIG. 14.

Stone in kidney. (Produced as a positive.)
Note outline of kidney.

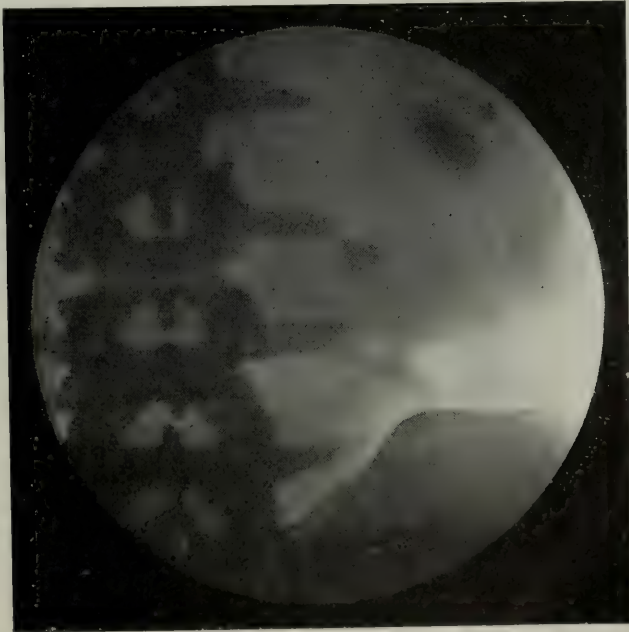


FIG. 15.

Stones in kidney. Kidney shadow greatly
enlarged and suggesting hydronephrosis.

PLATE IX.

DR. W. G. HARVEY on "Röntgen Rays in Medical
Diagnosis."

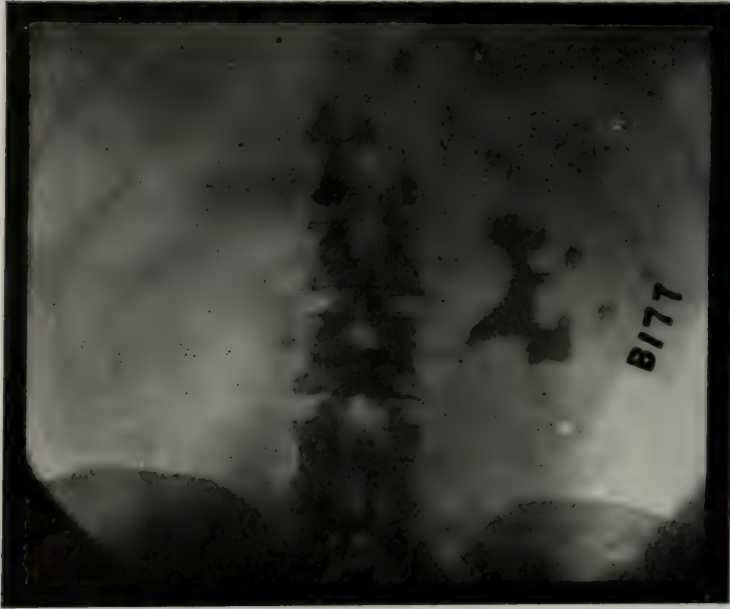


FIG. 16.

Typical shape of a stone blocking kidney pelvis
and causing hydronephrosis.

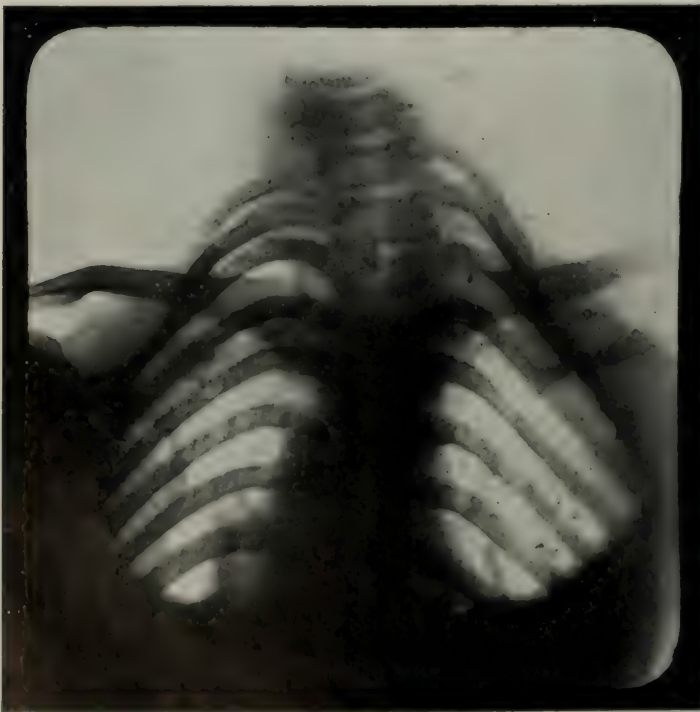


FIG. 17.

Left) [Right
Double cervical ribs. N.B.—That on the left side
is jointed near clavicle.

again showing clearly, and the position and outline of cæcum and colon can be readily displayed. (Plate VII., Fig. 12.) Where obstruction or ptosis is present they can be seen as before. (Plate VII., Fig. 13.) Moreover, the rate of movements in constipation, &c., can be observed. Normally the bismuth should reach the cæcum in about four and a half hours, the splenic flexure in about nine, and Hertz has found that constipation may be classified into two main types according as to whether the delay is in the colon, or not until the rectum is reached.

Where the delay is due to organic narrowing or obstruction a bismuth meal or bismuth enema will often furnish us with useful information as to its existence and location.

I shall not enter into detail with regard to the genito-urinary system, as many of you will remember the very full way in which it was dealt with last year.

You will remember that not only can calculi be shown in the kidney, but that the size and shape of the kidney as shown in a radiogram may be of the utmost importance. (Plate VIII., Figs. 14 and 15.) Many of you will recall to mind the extremely neat device of a graduated ureteral catheter shown by Mr. Thomson Walker whereby the exact size of the kidney can be determined. Again, the shape and general appearance of calculi may give some idea of the condition of the kidney, as where the shape indicates that a large stone is blocking the pelvis and causing disorganisation of the kidney substances. (Plate IX., Fig. 16.) Collargol may also be used to demonstrate hydronephrosis. Stones in the ureter may require careful differentiation from calcified glands or other concretions, and for this purpose stereoscopic negatives with a ureteral catheter in position may be required, but their proper identification is practically always possible.

There are many other ways in which radiography may help us in diagnosis, as, for instance, where a supposed sciatica is found to be due to an arthritic condition of the hip-joint, or where pain or wasting and weakness of the arms resembling progressive muscular atrophy is

shown to be due to the presence of cervical ribs. (Plate IX., Fig. 17.) A case of apparently simple lateral curvature of the spine may turn out on radiographic examination to be a rare case of congenital abnormality of the vertebræ. (Plate X., Fig. 18.)

It is impossible, in the time at my disposal, to enter more fully into the subject. I have only attempted to deal with the general principles. I hope, however, I have succeeded in giving some idea of the advances made by x-rays in medical diagnosis. Let me once more insist upon the necessity for correlating clinical with radio-scopic findings. So, only, can we hope to better our diagnosis, and so, in the future, from the proper union of these two, may medical science gain strength.

ART. II — *Interesting Complications of an Hysterectomy.*^a

By ALFRED SMITH, F.R.C.S.I. ; Professor of Midwifery, National University of Ireland; Gynaecologist, St. Vincent's Hospital, &c. (Illustrated.)

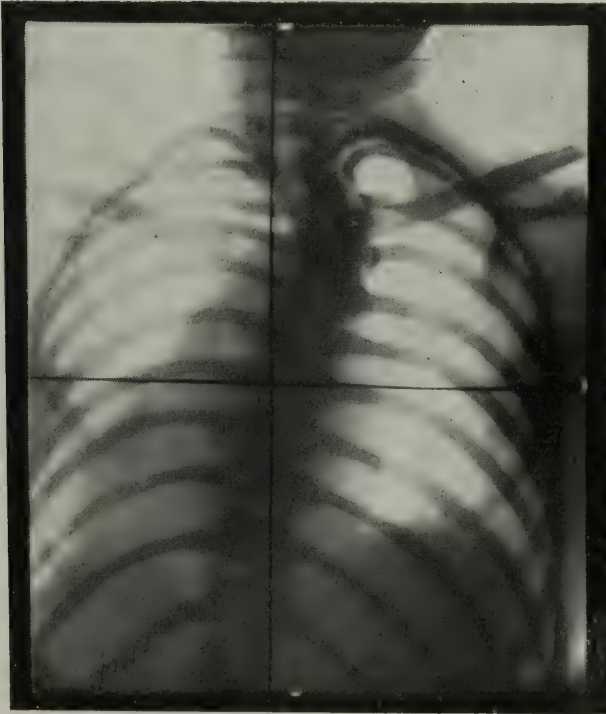
It is not my intention to occupy the attention of this Section for any great length of time. I wish to bring under your notice and place on record an "abdominal surprise" which I venture to suggest is in many points quite unique. On September 23rd of this year (1912), I saw in consultation with Dr. O'Reilly, of Ratoath, a private patient, whose symptoms, owing to age and unpleasant vaginal discharges, suggested malignancy. Under ether I was able to satisfy myself that the cause of her trouble was multiple fibromata of the uterus without any evidence of malignancy.

A sub-total hysterectomy was advised, and successfully performed by me, assisted by Drs. O'Reilly and Meenan, on September 26th, 1912. The operation over, I proceeded to make the peritoneal toilet, and felt my finger pricked by some sharp instrument. On investigating the

^a Read before the Section of Obstetrics in the Royal Academy of Medicine in Ireland, on Friday, December 13th, 1912.

PLATE X.

DR. W. G. HARVEY on "Röntgen Rays in Medical
Diagnosis."



Left|

FIG. 18.

|Right

Scoliosis due to extra rib and half vertebra on right side. The three top ribs on right side lie close together. The fourth can be seen in the original negative to articulate with an extra wedge-shaped half vertebra.

PLATE XI.

DR. A. SMITH on "Interesting Complications of an
Hysterectomy."



Appendix containing two needles and one pin.

cause I found the point of a needle sticking through the wall of a small intestine. To prevent the possibility of leakage a purse-string suture of fine catgut was inserted so as to encircle the needle opening into the intestine, the end being tightened together as the needle was being withdrawn. I searched further, and, to my astonishment, I found more needles—some lying in the omentum away from any coil of intestine. Others were found projecting through the wall of the intestine, but covered by a smooth covering as if a diverticulum had been made from the intestinal wall (specimen shown). Others had perforated the intestine, but a protective omental adhesion surrounded the needle.

The appendix, which dipped into the pelvis almost to the floor, was, as you see, hypertrophied and markedly congested. On palpation a hard body could be felt. It was removed.

Dr. Harry Meade made an *x*-ray photograph (here shown, Plate XI.) of the appendix showing two needles and one pin lying parallel to each other, the heads being down. The eye of the needle is plainly to be seen, and Dr. T. T. O'Ferrall opened a window in the appendix showing the three metallic bodies *in situ*. All the needles, as you see—10 in number—are tarnished by H_2S . They are extremely brittle and of the same size.

Considering the nature of the operation, some anxiety was felt as to the subsequent convalescence. Nothing untoward happened until the end of the third week. Preparations were being made for the patient to get up. On the morning of the appointed day, whilst stooling, the patient was seized by an acute pain referred to the anus. The sister in charge, on making an examination, found a needle stuck in the mucous membrane, which she promptly removed. Some days following this the patient complained of abdominal pains, aggravated by pressure over both iliac regions. Palliative measures gave little or no relief. The possibility of more needles being present was considered, and Dr. Maurice Hayes kindly skiagraphed

the patient for me. (Plates here shown.) Two of the plates locate (as you see) three needles—one on the right side evidently broken in two, another on the left side at pelvic brim, and a third somewhere about the os pubis. I reopened the abdomen. It was felt that although the presence of needles was demonstrated, their precise position, whether in the intestine or outside it, could not be determined. My anxiety was soon allayed, as dipping my fingers into the left iliac fossa I found at once a needle perforating the sigmoid flexure of the colon, but well protected by omental adhesions. The broken needle which I show you, covered by its fibrous envelope, was removed from a small intestine on the right side. The third needle—that is, the one indicated lying close to the os pubis—was found in the omentum.

My “bag” consisted of ten needles and one pin. In looking up references to foreign body appendicitis I find in the September number of the *Annals of Surgery* an exhaustive article by Royal Hamilton Fowler, M.D. He says sharp-pointed metallic foreign bodies represent a class by themselves. They have rarely been found even in large surgical experiences, and their occurrence represents a surgical curiosity. The common domestic pin is the most frequently encountered body of this nature found in the appendix. McBurney and Park have seen but two cases. A. O. J. Kelly found one instance in a study of 460 cases. Kelly and Hurdon but one in 1,000 cases. Bell two in 1,000 cases. Ewing, Schultze and Wood in exceptionally large pathological experience have observed no cases. Barnes, in a study of 94 cases of true foreign bodies found in the appendix, estimated that more than 52 per cent. were pins. Whist Fowler observed one instance in his first series of 50 cases of appendicitis.

As regards the number of metallic bodies found in the appendix, McBurney found two pins lying parallel to each other, and Hirst also found two pins in an appendix which he removed.

On looking up the references to which I had access I

cannot find recorded any case where three sharp-pointed metallic foreign bodies were previously found in the appendix. The presence of two needles is also interesting.

General observations and conclusions.—There can be no doubt, from the positions where the needles were found, that they gained an entrance to their host through the alimentary tract. Yet the patient stoutly denies that she ever had the habit of holding needles in her mouth or of swallowing them. She admitted, however, that when a child in her nursery the nurse frequently gave her the work-basket to tidy and play with. That the needles were a long time lost is evident from their extreme brittleness, the well-organised fibrous envelope which covered the perforating needles, and the distance which some of the needles travelled into the omentum. This case then goes to confirm the view that the presence of metallic foreign bodies is more apt to cause chronic than acute appendicitis.

Remarkable features.—That so many needles could be swallowed with such apparent impunity. That their perforation of the intestinal wall gave rise to so little disturbance, no evidence whatever of anything approaching peritonitis, merely tiny protective fibrous sheets, or a delicate omental adhesion covering the needles. That this is the first recorded instance of three sharp-pointed metallic foreign bodies being found in the appendix.

ART. III.—*Carbuncles Cured by Colloid Mercury.* By
G. ARBOUR STEPHENS, M.D. ; Appointed Surgeon under
the Factory Act.

IN the DUBLIN JOURNAL OF MEDICAL SCIENCE for June, 1911, I endeavoured to show that, if by any means we can hasten the catalytic process associated with a specific micro-organism, the treatment of the disease is considerably facilitated.

In the experiments I conducted with the yeast cells I found on adding boiled yeast to the living form in

a suitable medium that a great stimulus was given to the growth of the latter, whereby its life history was brought to an earlier end.

This more rapid growth is associated with a more rapid formation of catalytic products, and consequently leads to a greater concentration of them whereby reverse fermentation is set up early and the whole process more readily terminated.

Anything that hastens reverse fermentation, and consequently hurries up the formation of anti-bodies which are found amongst the catalytic products, tends to stop the original process.

In disease, catalytic products are set up by a process that is on all fours with fermentation, and our great aim in treatment should be to produce as rapidly as possible as great a concentration of those catalytic products or anti-bodies which shall reverse the process originally set up by the specific micro-organism.

Vaccine treatment, as carried out to-day, consists of the injection of an emulsion or suspension of destroyed germs similar to the ones that gave rise to the disease. Preference is given to those which have been cultivated from the original disease, and having been subjected to a temperature sufficient to destroy them, a certain definite amount is suspended in water and injected hypodermically.

This vaccine treatment is practically identical with the above-mentioned experiment with yeast, where the addition of boiled yeast hurried up the formation of those products which were calculated to reverse the original process, the killed germs tending to hurry up the formation of the much-needed anti-bodies.

The determination, recognition and isolation of the specific organism is a matter that requires special skill and experience, as well as suitable appliances and place, but if the same result can be brought about without any of the mechanical drawbacks and dangers of contamination, and by means of a simple method, treatment is facilitated and allows of its being adopted by all practitioners.

To bring such a desideratum about it is necessary to find some means of destroying the organisms *in situ* without doing any damage to the tissues or introducing any poisonous substance into the system. This can be done by the use of colloid mercury, if it be properly and efficiently applied.

Colloid mercury is prepared by passing a suitable current through water in which is deposited metallic mercury, when particles of the metal are torn off in such a fine state of division that they do not subside on standing, for months.

In order to allow the colloid mercury every opportunity of producing the desired result, it is necessary for the close application of the drug to the germ to remove any grease that may be present. This is best done by the rubbing in of either ether or chloroform, both of which have the additional advantage in that they affect the lipoid wall of the micro-organism and reduce its surface tension. This method I have employed in the under-mentioned cases, and the good results seem to me to fully justify this treatment.

CASE I.—A man aged sixty-two, of poor physique, had been troubled with a “boil” on the back of the neck for a week previous to my seeing him. On examination I found it was a raised inflamed flat-topped sore with several small holes in it from which was issuing some sero-purulent fluid. There was a considerable amount of pain up the back of the head, otherwise the patient did not feel very ill. I applied the colloid as above, and during the first four days the holes got gradually larger and eventually coalesced. On the sixth day I extracted the “core” through the enlarged combined opening. The sore healed up from the base, and was practically well at the end of a fortnight.

CASE II.—An ex-army man, aged thirty-nine, of sound constitution, complained of a nasty “pimple” on the tip of his nose. On examination I found it flat-topped and tender, with two small openings. After five applications the “core” was easily extracted and the cure proceeded to a quick recovery.

CASE III.—A man, aged twenty-eight, healthy and athletic, complained of a sore on the inside of the right thigh. It was very painful, and interfered with walking. On applying the treatment this apparently blind boil became considerably aggravated, no opening appearing to develop, so that I had to incise the swelling, and in two days I easily extracted the core.

CASE IV.—A man, aged fifty, fairly healthy, but not robust, had a sore on the back of the right wrist, which did not respond to fomentations, but became worse and more painful. I applied the colloid, when the sore got very painful for three days, when I incised, and the "core" was readily removed.

In all these cases the isolating of the "core" was very marked, the whole of it being practically detached in the cavity of the carbuncle.

To quote other cases is only to repeat; but in all the striking feature was the immediate stop to the extension of the inflammation. The activity seemed entirely confined to the centre of the sore instead of to the edge, and in cases III. and IV. the activity inside was very marked.

This treatment I have also applied to ringworm with exceedingly good results, and in its action in this affection we find some explanation of the value of tincture of iodine. The alcohol of the tincture takes the place of the ether or chloroform, and so removes the grease as to allow the iodine to get at the germs, but evidently the combination is not quite satisfactory, and to apply the iodine separately would be to invite some dire results. The colloid in ringworm tends in a few days to produce a pustular condition of the patch, and when this is cleared away it is found that the ringworm has ceased to exist. The colloid produces no discoloration, and there is no pain in its application.

The method is simple and efficacious, and one that can be readily applied by all general practitioners.

PART II.

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

YEAR-BOOKS FOR 1913.

1. *Whitaker's Almanack for the Year of Our Lord 1913.* By JOSEPH WHITAKER, F.S.A. London : 12 Warwick Lane, Paternoster Row, E.C. 8vo. Pp. v + 1037.
2. *Whitaker's Peerage, Baronetage, Knightage, and Companionage for the Year 1913.* London : 12 Warwick Lane, Paternoster Row, E.C. 8vo. Pp. lxxxv + 854.
3. *The International Whitaker: A Statistical, Historical, Geographical and Commercial Hand-book for all Nations: more especially designed for the 200,000,000 English-reading People of the World.* London : 12 Warwick Lane, Paternoster Row, E.C. 8vo. Pp. xlviii + 527.

OF these three works, the two first-mentioned are old friends and favourites of our readers. The third is a new claimant for popularity, and that we doubt not will soon fall to its lot also.

1. "WHITAKER'S ALMANACK" well maintains its reputation. Among new articles will be found an admirably clear summary (at pages 793 to 795) of the provisions of the National Insurance Act, short monographs on "Labour Unrest in the World," and "Labour Conciliation in the British Dominions," by Mr. George G. Sharp (pages 751 to 754, inclusive), and a treatise on "Public and Private Wealth" (pages 755 to 764). "The Rates of London" (pages 796 to 798) will afford food for thought to budding political economists. Useful tables relative to the disposal of Intestates' Estates have been reinstated in the present edition. But is there not an error in the heading of the

"Table of Succession applicable to England and Scotland" at page 418? The Intestates' Estates Act, 1890, applied to England and Wales, and Ireland. Its provisions were applied to Scotland by the Intestate Husbands' Estate (Scotland) Act, 1911.

Another mistake to which we drew attention in our review of the Almanack for 1912 is stereotyped at page 519, where three of the Vice-Regal Household are transferred to the Royal Household in Ireland. This, however, is a very small matter in a volume so replete with useful and in the main accurate information.

2. THE seventeenth annual issue of "WHITAKER'S PEERAGE," as we may call it shortly, includes, at page 103, the regulations promulgated in 1912 as to the wearing of orders, miniature decorations, and medals with evening dress. The distinctive features of the work are its very moderate price—five shillings net, its alphabetical arrangement, which make its pages very handy for reference, and its large circulation, which proves its popularity.

3. "THE INTERNATIONAL WHITAKER" is now issued for the first time in cloth covers, or boards, and at the wonderfully small price of two shillings net. It is intended to supplement—but not to supersede—"Whitaker's Almanack," from the pages of which, however, a great deal of information is borrowed, though with extensive additions. Opening with a copious index, the book consists of four parts, with the headings "The Universe," "The Continents," "The Nations of the World," and "British and American Representatives Abroad." There are several small maps uncoloured. In a future edition these might be amplified and inserted as coloured plates.

The Sixth Annual Report of the Henry Phipps Institute for the Study, Treatment and Prevention of Tuberculosis.
Philadelphia. 1912. Pp. 137.

FOUNDED in 1903 "for the study, treatment and prevention of tuberculosis," this institution has been carrying on a valuable work chiefly as a research agency under the

able organisation of Dr. Lawrence F. Flick. The statistical and pathological work dealt with in previous Reports has been the subject of several appreciative reviews in this journal.

Early in 1910, Dr. Flick having resigned his position, the Institute was placed under the control of the University of Pennsylvania and its organisation was in some degree changed in order to meet the requirements incident to its use as a teaching agency.

It is still maintained by Mr. Henry Phipps and retains its character as an Institute of Research.

The Report at present under review is the first issued under new control. It deals with the period from Feb. 1, 1908, to Feb. 1, 1910. It consists of statistical tables of considerable detail, pathological reports, including a summary of autopsy results in three hundred and twenty cases collected in a period of five years, and four papers on experimental work. These papers deal with the action of pancreatic extract on the tubercle bacillus, the ophthalmo-tuberculin reaction, the relation of intestinal absorption to pulmonary anthracosis, and the finding of alleged tubercle bacilli in the blood. Of these the last paper is of most interest, the writer's conclusion being that tubercle bacilli do not constantly circulate in the blood of tuberculous individuals though they are present occasionally as shown by the inoculation experiments of Liebermeister.

The report is much less voluminous than its predecessors, and from the extensive list of errata supplied with the volume one gathers that more attention might, with advantage, have been given to proof reading before publication.

An Historical Outline of Ambulance from the Earliest Times. By CHARLES H. MILES, L.R.C.P. (Lond.). Bristol : John Wright & Sons, Ltd. London : Simpkin, Marshall. (No date). Pp. 24.

THIS small book, written by Dr. Charles H. Miles, who has been closely identified with ambulance work, will be

much welcomed by those interested in such matters. It gives a short account of the history of ambulance from the earliest times.

Dr. Miles briefly sketches first aid methods from the days of Homer, who in the Iliad has told us of the rough surgery accomplished by the warriors who fought at the Siege of Troy.

These and other classical references are interesting as showing how in ancient days "first aid" of a sort was carried out with some skill.

The founding of the Order of the Hospital of St. John of Jerusalem was the beginning of an organised effort to render ambulance assistance to the wounded and sick which continued during the many and varying fortunes of the Order up to the year 1877, when the modern Ambulance Association came into existence.

The literary style of this little book is good, and it will be read with much interest by the many who are now identified with first aid teaching and by the members of the St. John Ambulance Brigade, an organisation which is carrying out all over the British Isles such useful and altruistic work.

Manual for Women's Voluntary Aid Detachments. By P. C. GABBETT, M.R.C.S., Lt.-Col. I.M.S. (Retired). Bristol: John Wright & Sons, Ltd. London: Simpkin, Marshall. (No Date.] Pp. 103.

EVERY page of the 100 pages of this manual by Colonel P. C. Gabbett is of interest, and may be read with advantage, not alone by "first aiders," but by all hospital nurses. It has been written with the intention of indicating to the members of a "Women's Voluntary Aid Detachment" what will be the scope of their duties if they are ever called upon to serve their country in time of war or national emergency. We have been hearing and reading much of late of the dangers which beset us of a European war, and vivid pictures have been drawn of the parlous state of unpreparedness in which we might

find ourselves if such a calamity were to arise, and certainly we must admit that if called upon to face such a crisis in our nation's history without organisation and preparedness the results might be unspeakably disastrous and disappointing. There are, however, many movements on foot at present which, in a quiet way, are doing excellent work by education, and not the least effective of them are the St. John Ambulance Brigade and the British Red Cross Society. In connection with these bodies the Women's Voluntary Aid Detachments have been formed.

Colonel Gabbett's manual deals with the directions in which women's detachments may more usefully turn their studies and preparations for the one object of their existence—namely, the care of the sick and wounded in time of war. The manual deals with the clearing hospitals, equipment of temporary hospitals, notes on nursing, first aid, diets and medicines. The chapters dealing with surgical cleanliness and operations are particularly interesting, and the directions regarding asepsis and how it should be carried out are dwelt upon in a clear and thorough fashion. They might be read with advantage by every probationary hospital nurse. We notice specially the suggestion that the theatre nurses should pay periodical visits to the dentist and thus avoid carrying septic teeth in their mouths, a possible source of infection to the patient. Nowadays, when every detail of the equipment and management of the modern operating theatre is carefully supervised, this danger, we think, may often be overlooked. It is one of some importance, not alone in the nurse's own interest, but in that of the patient also.

All details as to equipment of temporary hospitals have been carefully thought out and tabulated in a manner which cannot but prove of much value to those who wish to fit themselves as useful nurses and helpers should their services ever be called upon. No useless directions are given, and only those duties are specified which a volunteer ambulance nurse is likely to be asked to perform in time of need,

We commend this little volume very heartily to all Ambulance and Red Cross "units." The information set forth shows a breaking away from the more or less stereotyped teaching laid down in some of the ambulance and nursing manuals at present in use, which, though excellent in many respects, contain much of little practical value and dwell upon matters which might with advantage be left out.

In chapter IV., on Nursing, the writer says "She will not be expected to put up fractures, diagnose various forms of convulsions or treat snake bites, neither is there any necessity for her to learn the names of bones and arteries, but she will, for instance, be expected to know the meaning of surgical cleanliness, and to be able to get everything ready for, and to assist at, an operation, and to feed a patient sick with typhoid fever." We doubt, however, the practicability of the suggestion that such volunteer nurses in their training should spend a fortnight every year as a hospital probationer. We do not know any hospitals where such an arrangement could be permitted, valuable as the training might prove to the "first aider."

The little book will, we are sure, be much appreciated and prove itself a very valuable addition to the text-books available for both St. John Ambulance and Red Cross workers.

Blood-vessel Surgery and its Applications. By CHARLES CLAUDE GUTHRIE, M.D., Ph.D.; Professor of Physiology and Pharmacology, University of Pittsburg; former Professor of Physiology and Pharmacology, Washington University; Instructor in Physiology, University of Chicago; Demonstrator of Physiology, Western Reserve University, &c. Illustrated. London: Edward Arnold. 1912. Pp. xv + 360.

THE book before us is one of the International Medical Monographs upon a subject of immediate interest.

It is fitting that this interesting and important subject

should be printed in book form. The volume, it is true, deals mainly with experimental work, but, though the application may be as yet limited so far as man is concerned, it is none the less suggestive and interesting. The book starts with the history of blood-vessel surgery, after which the technique of the various operations is carefully described and excellently illustrated, while the remainder of the book treats of the results and applications.

An exceedingly interesting and instructive chapter is that devoted to the alteration of the circulation in goitre. The section devoted to the transplantation of tissues is also exceedingly interesting. The book is one we can cordially recommend.

Syphilology and Venereal Disease. By C. F. MARSHALL, M.D., M.Sc.; F.R.C.S.; Surgeon to the British Skin Hospital; late Assistant Surgeon to the Hospital for Diseases of the Skin, Blackfriars; formerly House Surgeon to the London Lock Hospital. Second Edition. London: Baillière, Tindall & Cox. 1912. Demy 8vo. Pp. xii + 560. Six Plates.

THIS work now appears in a second edition. The first edition was published in 1906, before the advent of such important additions to the methods of diagnosis and treatment of venereal diseases as Wassermann's reaction, serum therapy, and salvarsan. The present edition includes a description of these recent advances in our knowledge of venereal diseases. Each chapter concludes with a useful list of references, of which there are no less than 469 in the volume. The text includes the names of 512 authors. We note with pleasure that Dr. Marshall is not unmindful of the valuable contributions to the science of syphilology made by former members of the profession practising in Dublin. He reminds us that the contagiousness of secondary syphilitic lesions was established by Wallace, to whose genius we are also indebted for having first introduced iodide of potassium in the treatment of this disease. He reminds us that Colles announced the fact that the mother of a syphilitic infant was immune against

infection; that previous to Grainger Stewart, in 1870, drawing attention to syphilitic insanity, cases of mental hebetude, incoherency, and suicidal mania following syphilitic meningitis, had been reported by Read (1852); that Donovan used arsenic in the form of the solution bearing his name. This solution, containing arsenic, mercury, and iodide of potassium, is composed of the three drugs essential for the cure of syphilis. Carmichael and Lambkin also are referred to, though we cannot claim the latter as actually having practised in our city. There is yet much scope for research in the study of venereal diseases, and we jealously desire that the traditions and successes of our former syphilologists will be emulated by their followers.

Dr. Marshall considers, as do many other syphilologists, that late dentition may be caused by syphilis. Personally we agree with Still that the converse is the case, and that syphilis produces early dentition. Rickets is the probable factor in delaying the development of the teeth.

Dr. Marshall asks:—"Can syphilis develop without a chancre?" He recognises that it can. Our late colleague, Henry FitzGibbon, for many years taught that the acari of scabies were capable of acting as syphilitic carriers, and those infected by them with syphilis did not develop chancres. FitzGibbon also recognised that chancre of the labia majora frequently presented the character of a general unulcerated induration of one lip.

No one can study Dr. Marshall's book without being impressed by its exhaustive and inclusive nature. The number of authors referred to indicates the completeness with which he has laboured and compiled the material for his volume. The controversial views of syphilologists are impartially expressed. This is as it should be, but we confess that those consulting the book in search of definite assistance in cases of doubt and difficulty may find it impossible to adjudicate on these matters for themselves. Dr. Marshall's experience, learning, and reputation as a syphilologist are so universally acknowledged that we would have appreciated a more definite statement as to his personal views on most of these subjects.

In his account of the history of syphilis Dr. Marshall does not accept the orthodox opinion that syphilis was introduced into Europe by the sailors of Columbus. Ivan Block stated that "One single skeleton found in the whole range of the Old World which could be referred indubitably to a period prior to 1493, and which bore undoubted traces of syphilitic disease, would at once put an end to the whole discussion upon the age and origin of this complaint." Virchow has repeatedly declared that no such pre-Columbian or pre-historic bone was known to him. On the other hand, Dr. Marshall mentions the bones described by Lancereaux, Braca, and Zambaco, which are held by some to be syphilitic. The pathological changes found in these bones are commonly attributed to other causes than syphilis, Zambaco's case being a typical one of arthritis deformans.

The bones of American aboriginies found by Jones in the mounds and graves of Tennessee most distinctly indicate syphilitic changes, but these belong to the New World, and their ages are not certain.

Dr. Marshall refers to Biblical statements in support of his views. If we received a communication from a patient couched in the terms of the thirty-eighth Psalm, we should certainly be suspicious as to our correspondent's state of health.

We have read the protests against the habit of associating practically all diseases with direct or antecedent syphilitic infection. While sympathising with the protestors, we are nevertheless compelled from our own experience, as well as that of others, to realise the justification of Dr. Marshall's laying stress upon the ubiquitous and far-reaching effects of syphilis. We trust the following quotations from his book will prove interesting:—

"Heredo-syphilis is probably the chief cause of malformation of the uterus (uterus septus, bicornis, and didelphys; elongation of the cervix, anteflexion, &c.), as of other congenital deformities due to arrested development."

"Some cases of chronic fungating endometritis, which do not yield to curetting and other local measures, are

syphilitic in nature, and may be cured by anti-syphilitic measures."

"In many cases a so-called hereditary predisposition to consumption may be really a hereditary syphilitic soil, which predisposes to tuberculosis." We are entirely in accord with this statement, and have repeatedly, in these pages, emphasised this opinion. In a paper published in the twenty-fifth volume of the "Transactions of the Royal Academy of Medicine," we wrote:—"There is no doubt that syphilitic subjects are markedly predisposed to scrofulous conditions leading up to tuberculosis. This is especially obvious in people with hereditary syphilis."

Finally, Dr. Marshall quotes Goucher, who believes that appendicitis may be "a quaternary or late manifestation of syphilis." Out of thirty-two cases of this kind the latter found antecedent syphilis twenty-six times (eight cases of acquired syphilis, and twenty-one of hereditary).

The chapters on gonorrhœa are excellent. The book contains a useful appendix on methods of staining the organisms of syphilis and gonorrhœa, as well as a list of drugs used in the treatment of these diseases.

We notice one little orthographical peculiarity. Dr. Marshall continues to write "glycerin" with the terminal "e" as was customary some few years ago.

We congratulate Dr. Marshall on the fruits of his labours. The volume must have entailed a vast amount of care and hard work in its production. It is interesting and authoritative, and one we have pleasure in recommending to our readers.

S. S.

Coprostasis: Its Causes, Prevention, and Treatment. By SIR JAMES SAWYER, of London; Doctor of Medicine of the University; Fellow of Royal College of Physicians; Lumleian Lecturer, 1908. Birmingham: Cornish Bros. 1912.

THIS little brochure on chronic constipation by Sir James Sawyer is a readable and interesting summary of the subject from the point of view of a practising physician. It

does not contain anything very new, and the second chapter is practically a repetition of the first. Many, no doubt, will gain advantage by perusal of the work.

A Text-book of Practical Therapeutics, with especial Reference to the Application of Remedial Measures to Disease, and their Employment upon a Rational Basis. By HOBART AMORY HARE, M.D., B.Sc.; Professor of Therapeutics and Materia Medica in the Jefferson Medical College Hospital, &c. Fourteenth Edition. Enlarged, thoroughly revised, and largely re-written. Illustrated with 131 Engravings and 8 Plates. London: Henry Kimpton. Glasgow: Alexander Stenhouse. 1912. Royal 8vo. Pp. x + 984.

THIS great volume consists of four parts—(1) General therapeutical considerations; (2) drugs; (3) remedial measures other than drugs; and (4) treatment of diseases. In the first part we get a clear, terse, general statement of the therapy of the day; so well told that it is a pleasure to read it. The second part contains much useful information on incompatibility, prescription writing, dosage, and so forth. Then we come to a description of drugs, their characteristics and their therapeutic effects. Here the author very properly gives his reader the results of his own experience, and condemns or praises as seems good in his eyes; and dismisses such drugs as he does not approve of very briefly; thus under agaricin we find no mention of agaric acid, which in our hands has given good results in the night sweats of phthisis. He highly commends antipyrine in whooping-cough; but this, we think, is a trivial fault; it is but adding one more to the thousand and one remedies for that dangerous and distressing disease. We draw attention to these comparative trivial errors in an otherwise excellent reference book in order that our readers may see that there are few, very few, articles in the book we cannot but approve. We regret that in the notice of bismuth subgallate the author does not refer to its value in the diarrhoea of infants, and that he approves of heavy dosing with bromides in

epilepsy. No notice is taken of the value of cajuput as a stimulant in pneumonia. Chloroform, as is natural, occupies a large space, as does ether, and very properly so. But we find no mention in either article of the valuable experiments made and described by Dr. Augustus D. Waller with his chloroform balance; or of Sir Frederick Hewitt's paper on the safety of a 2 per cent. vapour of the drug; yet these papers were read at the Liverpool meeting of the British Medical Association. He, however, gives us statistics showing that more deaths occurred under chloroform than under ether. Such tables of statistics are of no value. Every powerful chemical, if improperly used, may have lethal effects. He credits Mr. Morton, a Boston dentist, with the discovery of etherisation, and, alas, ignores the claims of an alumnus of the Jefferson Medical School to the honour, and shuts his eyes to the beautiful medallion to the honour of C. W. Long, which the University authorities placed in the Medical School. From the *Boston Medical and Surgical Journal* of November 18th, 1846, we read that Morton administered his "Lethon," to Dr. Warren's patient on the 16th October, 1846. Dr. C. W. Long administered ether to Mr. Venables on the 30th March, 1842.

Cotarnine is very summarily dealt with; yet it is of recent introduction into medicine, and is one of our most valuable styptics. The dose stated is from $\frac{1}{2}$ to 4 grains. We have used the drug extensively, and we never got its therapeutic effects under 10 grain doses, and in some cases we gave such doses every two hours. He had hoped to find some acconut of the toxic action of hyoscine, but there is practically nothing added to what we find in Woodville of 1793, and not nearly as much as we read in the Crippen case. Magnesium sulphate is fairly well dealt with, but there is no mention of its value as a local application in erysipelas, or of its extraordinary power as a spinal anæsthetic. Blue pill mass is dismissed in a single line—"is rarely employed to produce systemic effects." So Matthew Baillie wrote to no effect. His splendid work at Millbank, his contributions to the *Medico-Chirurgical Transactions*, and his brilliant Gullstonian lectures, are

unknown in the United States, and in this excellent book we search in vain for the formula of his world-known pill. From the days of the Shepherd Kings of Egypt aloes and myrrh were combined as aperient. We sought to find an explanation for this combination, but our labour was in vain. Of nitrous oxide we read :—" Its first use as a surgical anæsthetic was by an American, Horace Wells, a dentist." It is unkind to Wells not to consider him as a scientist, and, therefore, cosmopolitan ; but as a fact the first use of the " factitious air " was at Hotwells Hospital at the instance of Mrs. Beddoes, a sister of Maria Edgeworth, of Edgeworthstown, whose " Tales of the Irish Peasantry " inspired Sir Walter Scott to write the " Waverley Novels." The article " Strychnine " is full and as far as it goes satisfactory ; but it is not as full as Dr. Hare could and should give. We learn nothing of the many varieties of the alkaloid, nor of the immunity from its lethal effects on some animals, nor of the conditions of health that mask its taste. We would also like to know something of its partial destruction in the body—a theory which played such an important part in the trial of Palmer in 1856. At which trial Ferrier, our greatest toxicologist, bore witness to the great similarity of the symptoms of strychnine and opium poisoning in some cases. We are thankful for Plate 1, " Phenol gangrene." Let us hope that it will convince all trained nurses that end all of surgery is not " carbolic." There is no mention of the poisonous properties of cream of tartar ; yet one of the interesting toxological cases is that of an attendant at the " Temple of Health " of a notorious quack, who died from a dose of the crystals of this salt. Of *veratrum viride*, the author gives us the opinions of the Woods, father and son ; but it would have been more satisfactory to have the experience of Norwood with the drug, or of Francis Payne Porcher, the Gérard of the Southern States.. The section on remedial measures other than drugs is suitable instruction for hospital treatment, but could not well be carried out in private houses. In the section on diseases, in the treatment of sacculated aneurysm gold wire is recommended. Little, of Sligo,

many years ago successfully treated such by common steel wire. The article on "Asiatic Cholera" makes no mention of the successful treatment of this terrible disease in Calcutta by Professor Leonard Rogers, of which he reported the details to the Royal Society of Medicine. The best proof of its value is that by his treatment he reduced the mortality amongst the natives at the hospital from 59.6 per cent. to 23 per cent., and amongst the Europeans from 81.6 per cent. to between 40 per cent. and 50 per cent. Murray's large doses of Fowler's solution are not included in the treatment recommended for chorea. We think the omission is a mistake. In the treatment of diarrhœa caused by indigestible matter the time-honoured and trustworthy prescription of castor oil, tincture of rhubarb, and laudanum is unnamed.

For erysipelas the author still recommends the iron preparation, but he puts little faith in internal medication for the disease. We cannot accept this teaching; withal we do not wish to differ from an author we so much respect, so we are content to quote a world-respected authority, Peter Mere Latham:—"I have met with cases of erysipelas in which I have been as sure as common sense could make me that, had there been no Peruvian bark in the world, the patients must have died. They have been cured by quinine—cured outright." Several places throughout the book we find Aubergier's syrup of lactucarium. There is a formula for a syrup of lactucarium in the United States Dispensatory, one in the French Codex, and one in the German Pharmacopœia, but these three all differ from Aubergier's syrup. And, to make matters worse, the syrup is unknown in the shops of our pharmaceutical chemists, and no formula for it exists in our home journals or in books on *Materia Medica*. It is, however, true that many years ago M. Gautier and F. Rénault published the formula. But worse still is the prescribing of Poland water, of which even the National Dispensary makes no mention. Puerperal diseases occupy some ten pages, and call for nothing but praise were it not that Credé is credited with introducing the method of external stimulation by the hand for the expulsion of the placenta. Credé, in 1861, did publish a paper in which he

recommended this method; but in 1760, just a hundred and one years earlier, Sir Fielding Ould, the successor of Bartholomew Mosse as Master of the Rotunda, practised it, and taught it to his assistant, Dr. William Collum, who afterwards practised in Enniskillen, and so the light spread.

We have carefully noted all that we considered blemishes in this otherwise excellent book with no other object than to effect their removal; but neither time nor space would admit of our telling of its richness in many things that go to make it a valuable book of reference—one worthy of the author whose reputation is cheerfully recognised from the Great Lakes to the Gulf of Mexico.

Internal Secretion and the Ductless Glands. By SWALE VINCENT, M.D. Lond.; D.Sc. Edin.; Professor of Physiology in the University of Manitoba. With a Preface by PROFESSOR E. A. SCHÄFER, F.R.S. London: Edward Arnold. 1912. Demy 8vo. Pp. xx + 464.

THIS is a most useful and admirable book. The name of the author is well known as one of the best authorities on the ductless glands, to the experimental study of which he has devoted much time and labour. He has now collated and analysed all the important work done in this field, and presents the work in the form of the volume now under review. In past years we have ourselves often felt the want of a book of this sort to which we could turn for up-to-date and complete knowledge concerning the physiology of the ductless glands. This want is now fulfilled, and as far as one can judge of so encyclopædic a subject nothing of importance has been omitted. Necessarily a work of the sort only forms a landmark, and it is to be expected that each year from the present the volume will begin to get out of date; yet we fancy in the future every investigator and every one who wishes to write on the subject of any of the ductless glands will be thankful for the analysed and collated work here presented. It is unnecessary to single out individual chapters as specially

good, as they are all written on the same plan. We have read through most of the book, and here and there have studied it carefully. The chapter on the pituitary gland happened at the moment to be of special interest, and a close perusal of it exhibited most fully the care and pains taken by the writer to include everything of value. The most recent papers are referred to, and their substance is discussed. In conclusion, we may add that the book is very readable. It might at first sight appear that a mere collection of *précis* of papers would be dull and tedious, but the author has succeeded in so grouping his material as to make his account of any individual organ more or less a continuous narrative, and over all he throws his own critical faculty, and adds his ideas. Finally, the printing, paper, and general get up of the book are all that is to be desired.

E. Merck's Annual Report of Recent Advances in Pharmaceutical Chemistry and Therapeutics. 1911. Vol. XXV. Darmstadt: E. Merck. 1912. 8vo. Pp. 508.

STARTING in the year 1887 as a booklet of some 15 pages printed in German only, this work has grown year by year until the present issue consists of 457 pages, and appears in four languages:—German, English, French, and Russian. A General Index, an Index of Diseases, Symptoms and Indications for Treatment, an Index of Authors, and a Bibliographical Index complete the work, and bring the total number of pages up to 508.

From the very first issue it has been the steadfast aim of the compilers to present a brief, yet strictly impartial, review of the therapeutical acquisitions of each year, and this has been done quite independently of the interests of any individual manufacturer or firm. There can be few, if any, therapeutic novelties of genuine interest and value which have not been duly noticed in "Merck's Annual Reports"—an unique publication which has helped workers in the field of therapeutics in all parts of the world.

Among other interesting features of the present edition we may mention special articles on the "Glycerophos-

phates" (pages 1 to 30), and on "Digitalis Glucosides" and allied drugs (pages 31 to 129). These articles have been published also in the form of separate reprints.

The only point in a matter of taste to which we would take exception is the printing of the words "E. Merck, Darmstadt," at the head of every page throughout the book. An indication of the subject-matter described in the letterpress of the page would be more useful, if more troublesome and costly to arrange.

A limited number of copies of the present volume will be sent to members of the Medical Profession on application to Mr. Merck's London Office, 16 Jewry Street, E.C. The book may be obtained also through the booksellers at a cost of one shilling and sixpence per copy.

Joint Tuberculosis. By LEONARD W. ELY, M.D.; Consulting Orthopædist to the County Hospital; Attending Orthopædist to the Children's Hospital, Denver, Col.; Member of the American Orthopædic Association and of the American Medical Association, &c., &c. Illustrated. Bristol: John Wright & Sons, Ltd. 1911. Pp. ix + 243.

THE volume before us must be described as a valuable contribution to our knowledge of this subject.

The author believes that his experience and work in connection with the pathology of the disease justify the conclusion that primary tuberculosis can arise only when lymphoid tissue exists as it does in the red marrow of bones and in portions of the synovial membranes of joints. The object of treatment, therefore, is to deprive the tubercle bacilli of their food-supply by leading to the disappearance of the red marrow and lymphoid tissue of the parts of the joints which takes place with the cessation of function. "An operation (which produces this result) that causes the disappearance of red or cellular or lymphoid marrow in the ends of the bones shuts off the food-supply of the bacilli. The bacilli can find no food in yellow marrow, but if a secondary infection be added the resulting suppuration furnishes the supply of cells peculiarly

adapted to the growth of tubercle bacilli, and tuberculosis invades the yellow marrow also." He says :—" To me this theory appears to explain almost everything, but its value depends entirely upon the correctness of the hypothesis." The author's statement, therefore, consists in fixation for a considerable period of time in children and a modified form of excision in adults. There are many statements with which we cannot agree, but the book is well worthy of perusal, and will be found to give the reader much food for thought.

Collected Papers by the Staff of St. Mary's Hospital Mayo Clinic, Rochester, Minnesota, 1911. London : W. B. Saunders Company. 1912. Royal 8vo. Pp. ix + 603.

IN this the third volume of " Collected Papers " will be found all of the papers which have been read or published from January 1st, 1911, to January 1st, 1912.

The list of contributors comprises 23 names—a very formidable staff. The volume may be said to consist of a treatise upon the symptomatology, pathology, diagnosis, and surgical treatment of the alimentary canal, the genito-urinary tract, and the ductless glands. Other papers will be found on " The Prevention and Treatment of Ventral Hernia," " Cervical Rib," " The Present Status of the Treatment of Fractures," " The Repair of Fractures with Steel Splints," some papers on Technique, and some general papers, including one on " The Causation of Cancer," and an exceedingly interesting paper on " A Visit to some of the Hospitals and Surgical Clinics in France." These volumes of " Collected Papers " should be read and studied by physicians and surgeons alike.

A Collection of Papers published previous to 1909. By WILLIAM S. MAYO and CHARLES H. MAYO. In two volumes. London : W. B. Saunders Company. 1912.

THE publication of these two volumes was brought about by the desire to collect and preserve a complete file of the writings of the Mayo brothers from the time of their

graduation from Medical College to February, 1909, the date of the publication of the first volume of the "Collected Papers by the Staff of St. Mary's Hospital." A similar arrangement of the subjects is adopted in these two volumes as is adopted in the other volumes of the "Collected Papers." The papers under each heading are arranged in chronological order, consequently the points in the development of the work of the Mayo brothers, are easily followed, while the progress of the evolution of General Surgery from the date of the earliest paper written in 1884 to the present time is rendered most interesting and instructive.

Another point of interest is the diversity of the character of the papers.

Portraits of the famous brothers are reproduced in the first volume, and appropriately enough represent the brothers at the date of graduation and at the present time. The editor—Mrs. M. H. Mellish—deserves the thanks of the profession for her praiseworthy and successful efforts.

Aids to Tropical Hygiene. By MAJOR R. J. BLACKHAM, D.P.H. (Lond.), R.A.M.C. London: Baillière, Tindall & Cox. 1912. F'cap 8vo. Pp. viii + 189.

"AIDS TO TROPICAL HYGIENE," by Major Blackham, R.A.M.C., should prove interesting and useful to those who have to live in hot climates, if only for the chapters on insect-born diseases, parasites, and prevention of malaria. The author has dealt at considerable length with this branch of the subject. It is a pity that a like care was not bestowed upon the rest of the book, which contains frequent contradictions. For example, Major Blackham states that in calculating the cubic capacity of a room no air more than ten feet from the ground should be counted, but on the same page he gives an example in which the height of a room is calculated at fifteen feet.

The chapter on food might be omitted with advantage. The author puts forward the view that the same quantity of food is required in a hot as in a cold climate, disregarding the amount of energy expended in keeping up the

body temperature in northern latitudes. He includes proteins with fat-formers, and dismisses Chittenden's researches in a paragraph. He devotes less than a page to diseases caused by food, while he dilates upon the evils of the misuse of tea and coffee in England.

The book, however, contains plenty of useful information, and includes several well-arranged tables.

Forschungen und Erfahrungen, 1880-1910. Eine Sammlung ausgewählter Arbeiten von PROF. DR. SIR FELIX SEMON, K.C.V.O. Investigations and Experiences. A Collection of selected works by SIR FELIX SEMON, K.C.V.O. Berlin: August Hirschwald. 1912 8vo. Band I. Pp xii + 669. Band II. Pp. 676.

THOUGH, as the title announces, the various items of this work have all appeared in print before, it will make a welcome addition to the library of the laryngologist, if only as a monument to a man, who, while still happily with us, has retired with honour from the active practice of an art of which he was in his time a foremost exponent.

Part of the book, such as the Türk and Czermak controversy, the contributions on Virchow, Wilhelm Mayer, Garcia and Mackenzie, as well as the illness of Kaiser Friedrich, are of purely historical interest, while some of the other articles are largely polemical. An important part of the work is occupied by investigations on recurrent laryngeal paralysis, and especially in formulating a theory as to why, when the recurrent nerve is subjected to pressure, the abductor muscles are first affected. The subject is treated in a very exhaustive manner.

Perhaps the most interesting and, from a practical point of view, most important sections are those dealing with malignant tumours of the larynx. As is well known, Sir Felix Semon played an important part in establishing Median Thyrotomy for the treatment of intrinsic cancer of the larynx, when that procedure was advocated by Butlin, who was the first to place it on a sound scientific basis. It was largely through Semon's advocacy that the

opposition which most of the continental authorities of the time placed in its way, was broken down, and the great merits of this method in suitable cases finally established. The technique as worked out by Butlin and Semon differs in no important respect from that of the present day.

Of quite exceptional interest are accounts of three cases of a rare form of ulceration of the throat attributed to pneumococcal invasion. The clinical appearances consisted in a chronic, very painful swelling and infiltration of the soft tissues of the throat, chiefly the soft palate and walls of the pharynx, whose surfaces were studded with small ulcers, often tending to heal spontaneously at the same time that fresh ones appeared. There was no history of syphilis and no glandular infection could be detected. Dysphagia was very great. That the complaint is rare there is no doubt, but recent experiences of the effect of Salvarsan in similar cases leave little doubt that the malady is of a tertiary nature. This view was in fact taken at the time of publication of these cases by some Continental laryngologists in spite of the absence of history, the presence of pneumococci, and the doubtful effect of mercury and KI.

The book is one rather for the library than the study.

Extraction of Teeth. By J. H. GIBBS, F.R.C.S., L.R.C.P., L.D.S. (Edin.), &c., &c. Edinburgh: E. & S. Livingstone. 1912. Demy 8vo. Pp. 163.

In a preface to this excellent book the author states, "as a justification for adding to the existing list of works upon the subject," that he has something new to say. This he has proved throughout many of the 163 pages of which the manual consists. To discuss *seriatim* the eight chapters comprising the work would not, perhaps, be necessary for the purpose of this brief review, suffice it to say that Mr. Gibbs has, in a lucid, readable and interesting manner, told us everything one need know about the extraction of the human teeth.

A short *précis* of the surgical anatomy of the jaws—

enhanced by some excellent photographic reproductions—introduces the reader to the discussion of the main subject. Throughout, the context is much elucidated by well-rendered illustrations. A comprehensive discussion—all clear, instructive and practical reading, upon the complications and difficulties that may arise—forms the subject-matter of the last chapter. The writing is thoroughly up to date, embodying all the more recent improvements in technique, instrumentation and after-treatment.

We heartily recommend this work to the notice of every dental student and practitioner.

The general turnout leaves nothing to be desired, both printing and paper being alike admirable.

X-ray Diagnosis and Treatment. A Text-book for General Practitioners and Students. By W. J. S. BYTHELL, B.A., Cantab., M.D. Vict.; Hon. Physician to the Ancoats Hospital, Manchester (Electro-Therapeutic Department); Medical Officer to the X-ray Department of the Manchester Children's Hospital; Medical Officer to the X-ray Department of the Salford Royal Hospital; and A. E. BARCLAY, M.D. Cantab.), M.R.C.S. L.R.C.P.; Medical Officer of the Electrical and X-ray Departments, Manchester Royal Infirmary; late Clinical Assistant to the Electrical Department of the London Hospital. Oxford Medical Publications. London: Henry Frowde, Oxford University Press and Hodder & Stoughton. 1912. Demy 8vo. Pp. xii + 147.

We heartily congratulate Drs. Bythell and Barclay on their book, which is by no means the least valuable of the Oxford medical publications. Such a volume should receive a warm welcome, for the stereotyped and tiresome faults of the average treatise on radiography are here omitted. We have no elaborate descriptions of apparatus and technique, both too often of a most transient character, nor are we troubled with innumerable reproductions of

curiosities of medicine and surgery collected by the fortunate authors. On the contrary, the illustrations are well chosen and sufficient without being unduly numerous. They are well reproduced, and in all cases show clearly what is intended.

The subject-matter is divided into ten chapters. The first is somewhat introductory, and deals with the uses of *x*-rays in medicine. We are glad to find the authors insisting throughout on the radiographic findings being intelligently correlated with clinical data, and not considered as a short cut to diagnosis. Again, in the chapter on injuries of bones and joints attention is very properly directed to the common fallacy (alike of the public and the inexperienced medico) of judging results of treatment by the amount of anatomical deformity rendered visible by the radiogram rather than by the functional result.

Chapter III., on diseases of the bones and joints, is thoughtfully written, and is free from the atrocious dogmatism which has characterised much of the writings on this subject. We venture to think that this portion of the book might be treated in somewhat greater detail in forthcoming additions. Osteomata, other than exostoses receive no mention, while the differential diagnosis of myeloid sarcoma and benign cysts might be more elaborated.

The chapter on the bones and joints in children is excellent, and is furnished with useful tables regarding epiphyseal conditions at different ages.

The examination of the head is treated in Chapter V. Here we think an extra page might well be devoted to the reproduction of some more dental films, showing the more common forms of trouble in which the dentist seeks the aid of radiography.

We take exception to one remark in Chapter VI. on the detection of foreign bodies—viz., that it is impossible to localise with any degree of accuracy by means of a screen examination. In many cases we have found that marking the position of the object on the skin, back and front, as seen on the screen in two different directions,

is the method most helpful to the surgeon. This, however, may well be regarded as a matter of personal opinion and practice, and is all we have to question in an admirably clear and concise section.

In writing of the thorax, the authors recognise the difficulty in distinguishing between an active tubercular and an old quiescent lesion. They have found three grain doses of KI for a few days prior to the examination to be of use in clearing the lungs. The general principles of Röntgen examination of the chest are well given, and in addition to tuberculosis we find brief accounts of bronchitis, bronchiectasis, lobar pneumonia, abscess, emphysema, pleurisy, pneumothorax, and new growths. The heart and mediastinum next receive attention, and the œsophagus is very thoroughly dealt with from the diagnostician's view.

Chapter VIII., on the examination of the abdomen, will probably be found the most interesting in the book. Despite all that has been studied and written with regard to abdominal troubles, clinical diagnosis is too often found wanting in this region. The vacuum tube has already thrown its ray deep into this dark sphere, and promises yet more light in the future. The authors have given a very well balanced and useful account of what we may expect from Röntgen examination, and of what means are necessary thereto.

Chapter IX., on the urinary system is an excellent résumé of modern work—its technique and interpretation.

We frankly confess to a feeling of disappointment at the inclusion of the last chapter, that on *x-ray* therapeutics, in this book. So far as it goes, we have little or nothing to say against it—in fact were it printed in the form of an appendix we should feel disposed to praise it—but a chapter of fourteen pages dealing with radiotherapy, its physiology and pathology, its technique, and its uses in diseases of the viscera, the skin and the nervous system must, however well written, be short and sketchy, and unworthy of the high standard of the rest of the book.

We can most confidently recommend Drs. Bythell

and Barclay's volume. It should find a place in the shelf not only of the radiographer, but of all such physicians or surgeons as would leave no stone unturned in the diagnosis of difficult or obscure cases.

Sprue : Its Diagnosis and Treatment. By C. BEGG, M.B.
Bristol : Wright & Sons. 1912. Pp. 124.

DR. BEGG has had over thirty years' clinical experience of the tropical diarrhœal affection known as sprue, and this volume is the outcome of his observations. For many years he practised in Hankow, but has now retired to Bath.

Since the experience of most, if not all, physicians in regard to the treatment of sprue is very gloomy, and stress is laid mainly upon diet, one naturally turns to the chapter on treatment in the book before us.

Dr. Begg is convinced that he has hit upon a safe and sure remedy for sprue, and states that it acts like a charm in all recent cases. This wonderful discovery is neither more nor less than *old yellow santonin*, given in 5 gr. doses, the last thing at night and the first thing in the morning. The drug is administered either in capsules or rubbed up with one teaspoonful of olive or almond oil, which can be taken on milk. The santonin is given for six days, and no ill effects have been observed except in one case of idiosyncrasy. White santonin is useless.

The Wellcome Physiological Research Laboratories.

We have received a number of reprints of papers emanating from the Wellcome Physiological Research Laboratories which testify to the wide range of work covered in the Institution. They are mostly of a highly technical chemical nature, intelligible only to experts, but some of these are of more general interest.

Of these latter may be mentioned a paper by Dale and Laidlow on "A Simple Coagulometer," whereby the

observation can be made upon a single drop of blood. The apparatus essentially consists of a capillary tube containing a small leaden shot. What is measured is the time after which the clot attains just sufficient consistence to support against gravity a spherical leaden shot of given mass in a tube of given diameter.

Dr. Walpole contributes a communication on "The direct determination of creatin in pathological urine." The estimation is based on the fact that creatin (*not* creatinin) gives a pink coloration with diacetyl in alkaline solution.

Surgical Operations. A Handbook for Students and Practitioners. By PROF. FRIEDRICH PELS-LEUSDEN, Royal Charity Hospital, Berlin. Only authorised Translation. By FAXTON E. GARDNER, M.D., New York. London: Rebman. 1912. Large 8vo. Pp. xxxi + 726.

THIS work, which is particularly intended for students and general practitioners, is an exhaustive treatise on Operative Surgery, and though the descriptions are, for the most part, clear and good, yet it must fail to fulfil its purpose, as it is too expensive for the average student, and too technical for the general practitioner.

From the operating surgeon's point of view, if the author had confined himself to operations which were now considered up-to-date, and to ones which he considered useful, the results would have been more satisfactory. We see no benefit that can be derived by any student or surgeon in learning how to tie the Dorsalis Pedis artery or in Lisfranc's disarticulation. Again, whether some of the descriptions have suffered through translation or not, there is sometimes a marked absence of clearness, as, for example, in the passage given on page 365, describing a chin guard: "It consists of a copper frame, bent so as to form an arch, almost as thick as a pencil, flattened, and well nickel-plated, with S-shaped ends, &c."

We see little use in giving descriptions of resection of the ribs, especially of the first rib, in cases of stiff and dilated thorax and tuberculosis of the apex of the lung.

In spite of the above criticisms the work is a valuable one for operating surgeons. The illustrations are profuse and clear, and the index is good.

The "Wellcome" Photographic Exposure Record and Diary, 1913.

A SIMPLE, concise and authoritative statement of present practice, excluding what is tentative and experimental, and giving brief, yet clear, directions for every approved process is always to be found in this annual publication, which is really a photographic encyclopædia in brief.

The desire for colour in photographic prints is one of the most noticeable features of present day tendencies, and this subject is fully treated in the new edition of this handy pocket guide, which has just made its appearance. The method of producing blue and green prints by toning is described in detail.

The excellent series of tables relating to exposure which have made the Diary such a trusty guide in former years are brought up to date, and—used with the "Wellcome" Exposure Calculator—serve to keep both the amateur and the experienced worker within the limits of the straight and narrow path where correct gradations are to be obtained.

Three editions of the "Wellcome" Exposure Record and Diary are published, one for the Northern Hemisphere and Tropics; another for the Southern Hemisphere and Tropics, and a third for the special requirements of the United States of America.

The book, which contains numerous diary pages for personal notes on photographic work, and is fitted with wallet and pencil, goes easily into the pocket. It is sold by chemists, photographic dealers, and at railway book-stalls, at the price of one shilling.

PART III.

MEDICAL MISCELLANY.

Reports, Transactions, and Scientific Intelligence.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

President—WALTER G. SMITH, M.D., F.R.C.P.I.
General Secretary—J. A. SCOTT, M.D., F.R.C.S.I.

SECTION OF OBSTETRICS.

President—A. J. HORNE, F.R.C.P.I.
Sectional Secretary—G. FITZGIBBON, M.D.

Friday, November 8, 1912.

DR. R. D. PUREFOY in the Chair.

A Case illustrating the Operations of Symphysiotomy, Pubiotomy, and Cæsarean Section.

DR. E. HASTINGS TWEEDY exhibited a patient illustrating the three modern operations for the birth of the living child owing to contracted pelvis. Symphysiotomy was performed on one occasion, pubiotomy on another, and Cæsarean section on the last. When performing the Cæsarean section he tied the tubes, as he considered the patient had suffered enough at the hands of the surgeon. There was no material difference between any of the operations so far as the time occupied in bed or stay in hospital was concerned. The longest stay was three weeks and the shortest a fortnight. Symphysiotomy was a little more difficult to perform than pubiotomy, but he did not agree with the general idea that the former was a painful and very difficult operation. The scar was about half an inch long instead of the pin-point scar of pubiotomy.

There was not the slightest interference with locomotion, and the patient on being questioned declared that she did not mind any of the operations, and that she was as well able to walk as ever she was.

DR. SPENCER SHEILL asked if Dr. Tweedy could give the exact diameters of the pelvis in the case, as symphysiotomy or pubiotomy was usually applied in one class of case and Cæsarean section in another. It would, he thought, be of interest to know why the three operations were performed in the order they were.

DR. TWEEDY said, in reply, he performed symphysiotomy first because the diameter of the pelvis permitted it and the woman was in labour; pubiotomy secondly because it was the easier operation, and Cæsarean section on the last occasion because the patient was not actually in labour, and he was not certain that the second pubiotomy would have been a safe procedure. With regard to the sterilisation, this is the first case in which he had sterilised. She was very poor, and he did not, therefore, think it desirable that she should further endanger her life.

A Case of Tubal Pregnancy with severe symptoms without rupture.

DR. R. D. PUREFOY read a paper with this title, and also showed specimens.

DR. GIBBON FITZGIBBON said that at a first glance on removing a tumour of the sort, one would be justified in suggesting tubal pregnancy, but in the face of the microscopic report it was difficult to be satisfied. He did not know whether there was anything in the case to suggest that the tube had discharged the pregnancy and the hæmatoma had formed then in the tube.

DR. ROWLETTE said that his examination of the specimen, as far as proving tubal pregnancy was concerned, was negative. On the other hand he did not know that the absence of anatomical evidence was a disproof. The specimen showed a concentrated effusion of blood as if the bleeding were at a definite point. He thought the diagnosis must rest on the history rather than on the examination of the specimen.

DR. TWEEDY said he thought the President in his interesting paper had exhausted the subject of hæmorrhage of the

tube. He (Dr. Purefoy) had shown that hæmorrhage could arise without tubal pregnancy. He thought this fact was often forgotten. He considered that it was a pity to bring forward ancient authorities when dealing with a matter of this kind, for he believed many of the cases cited by Dr. Purefoy were obviously tubal pregnancies.

DR. SPENCER SHEILL said that in order to glean a little further information he would like to know if the patient suffered from any of the subjective symptoms of pregnancy, and if, during the operation, the ovaries showed any change that might support the idea of tubal pregnancy.

DR. PUREFOY, in replying, said that when the patient came to him her account and the account of the case sent by the physician, together with the physical signs, led him to conclude that it was a case of ruptured tubal pregnancy, and he was surprised to find that the tube was not twisted or ruptured. He could not, therefore, accept the theory of torsion being the cause of the hæmatosalpinx. He was sorry to say that he did not inquire if any of the subjective symptoms accompanying pregnancy had been experienced. He would remember to examine the ovaries should he meet with another case of the kind. He could not agree with Dr. Tweedy that some of the cases quoted in his paper were tubal pregnancies.

Sterility, the salient feature in General Tubercular Peritonitis.

DR. TWEEDY read this paper.

SIR WILLIAM SMYLY said that the paper called attention to several points of considerable practical importance. The first was that sterility not infrequently depended upon conditions which could not be diagnosticated by palpation alone, and could be detected only after the abdomen had been opened. Therefore, in cases in which it was considered advisable to operate for the cure of backward displacements of the uterus in sterile women a method in which the abdominal cavity had to be opened would be preferable to one in which it had not, and for that reason he had latterly adopted a modification of Gulliam's method of shortening the round ligaments in preference to Alexander's. The next point raised in this paper was whether one would be justified in going even further and recommending an abdominal

operation in a patient who, excepting sterility, had no symptoms whatever. Under certain conditions he agreed with the author of the paper that we are. As to uniting the severed ends of the tube after resection, he feared that a stricture would occur.

DR. SOLOMONS regarded sterility as a disease inasmuch as in those cases where there was no definite pathological lesion there was often such a diseased state of mind that the patient was constitutionally ill. The question of sterility appeared to him a very difficult one so far as treatment was concerned. According to statistics collected by Brickner and published in *Surgery, Gynecology, and Obstetrics*, November, 1911, the operation of posterior division of the cervix gave only a 27 per cent. cure of sterility. If curettage and posterior division have failed to cure sterility, and there are no pathological conditions palpable, he asked should we persist in subjecting a woman to laparotomy for further diagnosis without first ascertaining whether the male was the cause? As regards palpation of the tubes, if the tubes could be felt very distinctly some disease is always present. Referring to retroversion and retroflexion, he always considered that retroversion alone without retroflexion is always associated with tubal disease. He thought that drainage with gauze in tubercular cases was better carried out through the posterior fornix instead of the abdominal route, with its attendant risk of sinus formation. He understood Dr. Tweedy to say that he had not much success with resection of the tubes. He (Dr. Solomons) remembered a case in which Dr. Tweedy resected both tubes, and the patient afterwards became pregnant.

DR. GIBBON FITZGIBBON said that in one case in his experience with retroversion of the uterus the only symptom was sterility. He could not make out anything wrong, but on doing a laparotomy he found both tubes diseased in the entire length, and he decided to remove them. This, he considered, bore out Dr. Tweedy's opinion that for retroversion the operation of opening the abdomen to see the state of the tubes was desirable. He also added that frequently the tubes are at fault in cases of sterility, even when nothing very definite can be made out. In another case he had found very dense adhesions in both tubes. The likelihood of recrudescence of disease made one think their resection was

of little use. He thought that in a number of cases the cause of sterility was in the tubes in the form of disease or occlusion.

THE PRESIDENT said that a good deal had been heard about displaced uterus and the fixing of same in a correct position, and it appeared to him that all the methods had advantages and disadvantages. Failure, he considered, was bound to follow if the round ligament was shortened and pregnancy afterwards took place. The same observation applied if the thin supports obtained failed to be of use in subsequent pregnancy. The paper opened up a question as to the different methods of draining the abdomen; theoretically he considered the vagina should be the correct method. The use of moist sponges and care in using them was of more importance than we have been accustomed to think, as the less the intestines are handled the better for the patient. He hoped to hear Dr. Tweedy dealing with secondary sterility on some future occasion. He considered the cause of secondary sterility of even more importance than primary sterility.

DR. TWEEDY, in replying, said before any serious operation was undertaken he considered the sterility or otherwise of the male should be ascertained. He only casually mentioned ventral suspension, but the discussion on this operation he considered of much interest. He thought that any one would be encouraged to open the abdomen in a case of one child sterility. He was aware that sterility was a symptom of some other disease, but for the matter of that so was club-foot, and yet all do not speak of the latter as a mere symptom. End-to-end anastomoses Sir William Smyly thought might cause stricture. He (Dr. Tweedy) was not in a position to say whether this does or does not do so, but epithelium has great attraction for epithelium, and it was well known that in cases where the tubes had been tied pregnancy had followed, thus showing the capacity of the tubes for becoming patent. He considered the suggestion of insufflation an excellent one, and warned those present against making false passages with the probe. Referring to the objection to drainage through the abdomen he preferred the abdominal to the vaginal method. He never experienced the formation of any sinus that persisted for more than six weeks. He never had a hernia following a gauze drain, and in six weeks it is almost impossible to see where the gauze had been placed.

SECTION OF SURGERY.

President—R. D. PUREFOY, P.R.C.S.I.

Sectional Secretary—C. A. BALL, F.R.C.S.I.

Friday, November 29, 1912.

MR. A. BLAYNEY in the Chair.

Radical Operation for Malignant Disease of the Testicle.

MR. SETON PRINGLE, after dealing with the pathology of new growths in the testicle, described the lymphatic drainage of the organ and the general anatomy of the region of the operation, illustrating his remarks with lantern slides. He laid stress on the fact that good results could be hoped for only if the operation were undertaken early before the involvement of the secondary glands. The case which he reported occurred in the left testis of a man aged twenty-eight. The operation was done by the extra-peritoneal route, and in this way the testis, cord, inguinal glands, spermatic vessels right up to the renal vessels, the psoas fascia, lymphatic channels and lumbar glands were all removed in one piece, as was well seen in the specimen which he exhibited. The patient made good progress, and now—six months after the operation—shows no sign of recurrence. The pathological report stated that the growth was a “mixed tumour” of a carcinomatous type, and that although the glands were enlarged, yet they showed no sign of malignant infiltration.

THE CHAIRMAN said that in the present state of knowledge the only effective treatment in such cases was radical operation. He asked why should this extensive operation not be carried out in cases of sarcoma, seeing that in sarcoma of the testes the lymphatic glands are usually involved, and it would, therefore, seem that the extensive operation should be done. He suggested that possibly the very free discharge referred to in the paper was the lymph returned from the lower limb, as no doubt a good deal of the channels had been cut.

MR. GUNN said he had an opportunity of seeing the operation carried out by Mr. Pringle, and it appealed to him as an excellent method of trying to relieve the severe form

of disease. He alluded to the danger of recurrence, and said that in three cases in which he had removed the testes for sarcoma he was afraid recurrence had taken place. He considered that there was a difficulty to be faced in making a diagnosis of the nature of the tumour, as to whether it was a simple cystic dermoid or a very malignant form of sarcoma—the latter he was afraid was hopeless. He also mentioned that during the operation there was an excellent view of the structures to be dealt with. He inquired if since the operation was performed there had been much alteration of the abdominal wall.

MR. STOKES said that with regard to sarcoma of the testicle he had a case in a child some years ago which he at first looked on as a hydrocele, but afterwards removed the testicle. He had seen the child recently, and there was no recurrence. He would like to know how a diagnosis could be made in the early stages.

MR. PEARSON said he did not follow Mr. Pringle with regard to the technique when he said he lifted up the peritoneum so as to expose the vessels and that the ureter did not come in the way, as one had to get the spermatic vessels from between the ureter and the peritoneal sac.

MR. PRINGLE, in replying to the remarks, said in speaking of dividing up tumours into two classes—sarcomatous and carcinomatous—for purposes of operation he did not include amongst the sarcomatous mixed tumours in which there were a few sarcomatous cells. It would not, he considered, be advisable to try the operation on sarcoma as in these tumours; although the glands were not involved, it is very likely some of the upper organs might be involved. As regards the discharge, he accepted the Chairman's suggestion. The abdominal wall since the operation is perfect, and there was no sign of hernia or any trouble of the kind. Referring to Mr. Pearson's remarks he would ask the leave of the Academy to amend the paper on the point mentioned. He pointed out that so far as diagnosis was concerned he advocated the taking out of a small piece for microscopic examination.

A Year's Experience of Dioradin in Surgical Tuberculosis.

MR. R. ATKINSON STONEY read a paper in which he gave the results of twenty-eight cases of surgical tuberculosis treated

by injections of dioradin. He had reported on fourteen of these a year ago, since which nine had received a second course of injections. He divided the cases into two classes, according as to whether they were complicated by sepsis or not. There were fifteen non-septic cases, and of these seven resulted in apparent cure, four were greatly improved and would probably end in cure, two were somewhat improved, one was not improved, and one which improved greatly for a time died later of tubercular meningitis. In the septic cases there were four apparent cures, two were greatly improved, and will probably result finally in cure, one was somewhat improved, and five were not improved, and one which improved died later of acute nephritis. Altogether, there were six cases without apparent improvement. One of these was an advanced septic hip, where it was very doubtful if there had ever been any tubercular trouble, another was advanced cystitis with probable double nephritis; three were cases of very extensive multiple lesions, and one was an early case of epididymitis. The first five of them were all practically hopeless cases, and could not be expected to respond to any treatment, but the case of epididymitis was a distinct failure, as it was discovered early, but progressed steadily and rapidly in spite of injections, and was found at operation to be actively spreading. Having given over 3,000 injections, he could say that he had never seen them do any harm or give rise to any discomfort even if given subcutaneously instead of intramuscularly. The following were the conclusions that might be fairly drawn from these cases:—(1) Dioradin injections are not a certain cure for all cases of tuberculosis; in some cases they will produce a cure more rapidly and more certainly than any other treatment. (2) Early cases of joint disease treated by injections, combined with ordinary methods of rest, good food, &c., will recover more rapidly and more surely than when treated without the injections. The same is probably true of glandular and other surgical affections. (3) In advanced cases with abscess formation, if injections are started before or at the time the abscess is opened, it will usually heal rapidly and the tubercular process apparently come to an end and a cure result in a large proportion of cases. (4) Finally, in those cases complicated by septic infection, dioradin injections will generally reduce the

temperature to normal, increase the appetite and weight, and lessen the amount of discharge, and in some cases even bring about a final cure, as in three of the cases reported in this paper.

THE CHAIRMAN congratulated Mr. Stoney on his impartial and judicial survey of the symptoms presented by the cases, and considered that in the summing up he (Mr. Stoney) had not claimed too much for the method. He considered the conclusions drawn from the results of the treatment to be justified. Dioradin appeared to render considerable assistance in dealing with the disease. There was one objection, however, to its use—*i.e.*, the expense. He thought very few hospitals could afford it.

DR. KIRKPATRICK said that he had but small experience of the method, and that the patients with which he had tried it were not ones suffering from surgical tuberculosis, but from phthisis. He was sorry to say that he did not see any improvement which could be attributed to the treatment. Four of the five cases which he had under observation last year came to a fatal termination; the other was a man of advanced age who had an involved tubercular lesion at the base of the right lung, and he improved considerably, and left the hospital expressing himself as quite well, although he (Dr. Kirkpatrick) could not satisfy himself that he was perfectly well. On the whole, he was not very favourably impressed by dioradin. Some of his cases had been seen and examined by Dr. Bernheim, who considered them suitable for dioradin treatment. He had seen a number of other patients who had been treated with the drug and subsequently with injections of iodoform suspended in ether, and it appeared to him that they reacted quite as favourably with the latter as when treated with the radio-active substance. He considered that the radium in dioradin was rather a substance added to it in order to increase the imagination of the patient. It appeared to him that the active substance in the drug was iodoform, and injection of iodoform in certain cases had been followed by good results. He suggested that it would be of interest to proceed with the investigations and try what the results would be from using an ethereal suspension of iodoform in a similar set of patients.

MR. C. A. BALL inquired if there was only one out-patient

treated in the series. This he considered a very important matter, as when surgical cases are taken into hospital a very large proportion of them put on weight. He suggested that, if Mr. Stoney could have an unlimited supply of dioradin free, he should try it with out-patients, and the comparison of the results with the hospital patients treated would be of interest.

MR. GUNN said that he had six cases of tubercular disease under treatment with injections—two of them with dioradin and four with a preparation supplied in Dublin which was much the same. Of the six cases one had done extremely well, and that case was treated with the inexpensive drug, one was too recently treated to draw any conclusion, and the remaining four have shown no improvement. All these cases had been treated with tuberculin before this without result, and he would like to know if the tuberculin treatment had any influence on the dioradin treatment. The proportion of failures in connection with the treatment of cases of tuberculosis of the ankle and foot, as compared with any other part, was remarkable. He considered any form of treatment which would have a good effect on cases of lupus was important, as in such cases it could be seen what was actually happening.

MR. STONEY, in reply, said he had treated only five cases of phthisis with dioradin, and the results were not very satisfactory or definite. One remarkable case in which there were complications was given injections of dioradin, and the patient increased nearly a stone in weight, the sputum was reduced, and the cough relieved. He was not, however, sure how much of the improvement was due to the relief of the complications and how much to the improvement in the lungs. With regard to the question as to the advantage of radium in the preparation, test tube experiments were made with and without radium on tubercle bacilli, and as well as he remembered the destruction with the radio-active solution was three times as fast as that with the non-radium solution. The active principle in the solution was not iodoform but iodine. There was only one out-patient treated, and in that case injections were given only every second day. Many of the patients had previously been in hospital for periods from three to fourteen months without improvement. He had not formed any definite opinion as

to cases which had previously been treated with tuberculin, but one of his cases—complicated with tubercular cystitis—had been treated with tuberculin, and at first showed marked improvement; however, in spite of the continuance of the tuberculin injections she became worse, and dioradin injections were tried, and the patient got steadily better, and she is now practically well. In other cases that had been treated previously with tuberculin he thought the results of the dioradin treatment had been much the same as in those which had not got tuberculin.

ROYAL COLLEGE OF SURGEONS OF EDINBURGH.

At a meeting of the College, held on Thursday, December 12, 1912, the following gentlemen, having passed the requisite examinations on October 11th last, were admitted Fellows :— William Anderson, M.B., Ch.B., Univ. Aberd., Aberdeen ; Frederick Adolphus Fleming Barnardo, M.B., Ch.B., Univ. Edin., Captain, Indian Medical Service ; Walter Waddell Carlow, M.B., Ch.B., Univ. Edin., Edinburgh ; Robert M'Lean Gibson, M.B., C.M., M.D., Univ. Edin., Hong-Kong ; William Clayton Grosvenor, M.B., C.M., M.D., Univ. Edin., Arnside, Westmoreland ; Henry Fleming Hamilton, M.B., Ch.B., Univ. Edin., West African Medical Service ; John William Hitchcock, L.R.C.S.E. (Triple Qual.), Suffolk ; John Albert Lee, M.B., C.M., Univ. Edin., Epsom, Surrey ; James Herbert Graham Robertson, M.B., Ch.B., Univ. N.Zeal., Captain, Army Medical Corps., New Zealand ; Stanley Robson, M.B., Ch.B., M.D., C.M., Univ. Durh., Gateshead-on-Tyne ; Percy Alexander Ross, M.R.C.S. Eng., L.R.C.P. Lond., Parkstone, Dorset ; David Henry Russell, M.B., Ch.B., Univ. Edin., Dunfermline ; Norman Craig Shierlaw, L.R.C.S.E. (Triple Qual.), Adelaide ; John Edward Llewellyn Simcox, M.B., Ch.B., Univ. N. Zeal., Dunedin ; William Percy Walker, M.R.C.S. Eng., L.R.C.P. Lond., D.P.H., Canada ; and at the same meeting Arthur Robinson, M.D., Professor of Anatomy, University of Edinburgh, was admitted to the Fellowship.

BRONCHO-PNEUMONIA AND ITS COMPLICATIONS IN INFANCY.

By PROFESSOR L. CONCETTI, Professor of Pediatrics in the Royal University of Rome. Translated from the "*Rivista Ospedaliera*," Vol. II., No. 8, by GEORGE MAHOOD FOY, M.D., F.R.C.S.I.

(Continued from page 386. Vol. CXXXIV. Third Series. No. 491.)

For didactic purposes we will consider the varieties of broncho-pneumonia which may be found in the same subject, in the same lung, or in the opposite lung by infection from one to the other.

1. Hyperacute, of the type of capillary bronchitis.
2. Acute, with permanent disseminated lobules.
3. Acute, with migratory disseminated lobules.
4. Acute pseudo-lobar, simulating lobar pneumonia.
5. Acute pseudo-lobar, with liquefaction of disseminated lobules.
6. Subacute pseudo-lobar.
7. Chronic pseudo-lobar.
8. Latent, of the abortive form, atrophic.
9. Septic, of the new-born.

If the first form is mistaken for capillary bronchitis, it is difficult to recognise whether it is in the initial or primary stage.

Anatomo-pathologically, if we were able to say in every case of capillary bronchitis we knew in what alveolus and lobule the disease was present, and if from its very small size we could not find the objective till the bronchitis and the hyperæmia would predominate, it would terminate rapidly in death in two to three days after the broncho-pneumonia was first revealed (suffocating form), with quick breathing, weariness, cyanosis, pallor of face, vomiting, fever, from 103° to 105.8° , sometimes ending with a sub-normal temperature, pulse small, thready; oliguria, cold sweats. In fortunate cases this impending hurricane moderates after one to two days, the temperature falls, with general improvement of the patient's condition, and there is a return after a few days of the symptoms of diffuse catarrhal bronchitis. Last week in private practice, we had two cases in which the favourable termination was due to the zealous care bestowed on the patients from the initial attack to the final recovery (warm aromatic baths followed by cold effusion

to the neck, back, thorax, repeated many times a day, large sinapisms to the thorax, many abundant inhalations of oxygen, hypodermics of camphorated oil, digitalin, strychnine and sparteine, ice to the head; stimulants—alcohol, caffèin, liquor ammoniæ anisatus, and so on).

XXVI. This case was the subject of a clinical lecture. The patient, a girl four years old, was admitted at the moment of the seizure in a very grave condition. She was in a state of high fever, with severe dyspnœa, cyanosis of the face and all the fingers, a distressing cough, and in a condition of anginosa; râles of every type in the thorax; the temperature was 99°, and rose to 102.2°; she was placed in the position that best facilitated her breathing, which was principally carried on by the extrinsic muscles of respiration, with marked retraction at the pit of the stomach. Treatment as above. After twenty-four hours the temperature fell to normal, and we found nothing more serious than a common bronchial catarrh, had there not been large adenoids present. At other times, instead of the violent phenomena of capillary bronchitis having moderated, there remains a more or less high fever, with remissions of a greater or lesser amount, and we get broncho-pneumonia, with disseminated nodules, fixed or migrant. Still the hyperæmic condition is manifest in healthy sites, and the disease may extend by contiguity from lobule to lobule after the manner of erysipelas. This form may be likened to a forest fire, which spreads from zone to zone, sometimes almost extinguished for days, and then suddenly leaping into a flame, fed with inflammable material by the winds. But acute broncho-pneumonia more commonly begins by disseminating nodules of infection, without being preceded in the lobule by diffuse capillary bronchitis, which would limit the spread of the infection, as is demonstrated in many of our cases. The pseudo-lobar form of broncho-pneumonia is often the consequence of the fusion of isolated nodules, else, if it commences in a subacute or in an active form, it will simulate lobar pneumonia. When the pseudo-lobar form predominates, the permanent phenomena of pneumonia, hepatisation and peri-bronchitis remain, with few or any of those of the hyperæmic type. We find that this form readily assumes a subacute or chronic type, with resolution by lysis, with frequent relapses and pleuritic complications.

When the attack extends for weeks or months, it justifies the suspicion that we are dealing with tuberculosis, the beginning of which was unsuspected.

In such a case it is necessary to send the child to the seashore, where, far from tuberculosis, he should quickly recover. During very warm weather the air of a country hillside or the base of a mountain may be preferred. Have we not seen many such cases, in grave conditions, with high fever, dyspnœa, relapses, running through all the moods for weeks and months, return quickly and brilliantly recovered? In such forms, therefore, of broncho-pneumonia, the sub-acute, chronic, recurrent, and all others that justify the fear of a process of tuberculosis, in a secondary form, or in that which complicates simple broncho-pneumonia, change of air is necessary. Tuberculosis may be acquired by contagion, children may also have latent foci of tuberculosis, in peribronchial glands, hence may come the tuberculosis in measles, whooping-cough, influenza, and so forth. Adenopathy thus, under the hyperæmic flushing which precedes inflammation, infects the bronchi and the pulmonary tissue, the tubercular virus is called from latency to activity, the caseous masses become softened, and by the lymphatics and blood-vessels are carried to the lung, to the pleura, and by the circulation generally to new sites and to more or less brief decay. We have an example in the infant referred to in Case XV.

In this case the biological test (cuti-oculo-intradermo-reaction) for tuberculosis was of little help. Indeed, in Case XV. it was negative; but in grave cases it often is negative, as when nullified by the toxins of measles. In the other case it was positive—that is to say, it gave grounds for the diagnosis of tuberculosis complicating the broncho-pneumonia. It is only by hypodermics of tuberculin (Koch's method) that we can recognise the presence of tuberculosis in cases of latent broncho-pneumonia. Some years we meet such cases in our clinique, in which, fortunately, the complication proves only transitory, and in which careful examination of the sputum daily conducted from the first fails to detect tubercle bacilli. It is, therefore, a possible danger, not to be overlooked, that might put the infant's life in danger, as was first demonstrated by Virchow.

The latent atrophic broncho-pneumonia which we find in

premature infants is, as a rule, apyretic, without difficulty of breathing, and without physical signs. Sometimes it is of the same type of broncho-pneumonia as that of the newly-born, septic (imbibition of infected amniotic fluid, of meconium, of vaginal secretions), or in the form of puerperal septic infection through the placental circulation, or through the fauces, and the like. In the General Hospital, Moscow, 8 per cent. of the broncho-pneumonia cases were of this nature. Sometimes with turbid liquid in the pleura and in the pericardium they always run an abnormal course, and after a few days terminate fatally.

In cases, such as we have not infrequently seen, affecting the nervous system, the initial convulsions, the delirium, the stupor, the spasms, are most frequent in the lobar form (cerebral pneumonia of Francesi). Sometimes these initial symptoms pass off in a few hours; in some cases, however, they may be less transient and remain for three to four hours, simulating true acute meningitis; in the selfsame cases, however, the thoracic symptoms are absent. This initial syndrome, so serious to all appearance, is not, therefore, of so much weight in forming our prognosis, not being associated with a high temperature, as at first one might have thought, but is due to the action of the pneumococcic toxin in the meninges and the cortical substance of the brain. Indeed, when by a lumbar puncture you remove much fluid, especially when you relieve the cerebral pressure and remove the albumen, and with it the lymphocytes, you have got nothing more serious than a hydrocephalic irritation and a serous meningitis. The syndrome that manifests itself during the course of the disease is always more serious than the initial one, nevertheless, even in such cases, if seen within an hour, and if lumbar puncture is performed, the symptoms vanish. Among our four such cases (IX., X., XIII., XVI.) only one (XVI.) ended in death, and the fatal result in that case may fairly be ascribed to the sepsis that followed and to an attack of erysipelas. In other cases, however, in which the lumbar puncture draws off a turbid fluid, or purulent fragments rich in diplococci and meningococci, the bacilli of influenza are present. They are to be treated as true secondary purulent meningitis, the course of which is to terminate fatally, as in our Cases XIX. and XX.

Giova records that the treatment of secondary purulent meningitis, complicating broncho-pneumonia, by the meningococci of simple purulent meningitis gives a lower mortality than any other, especially when supplemented by lumbar puncture and anti-meningococcal serotherapy. We have had one such case of an infant seven months old, this year, which terminated in recovery. After treatment of acute sero-meningitis it frequently follows that hydrocephalus results; it is less frequent after sero-purulent treatment, and less so after lumbar puncture. Moreover, it is necessary to note that cerebro-spinal fluid, when limpid, is an indication of the presence of a toxin; though not infrequently in such a case we find diplococci and meningococci. We recorded during the past year cases in which in the course of lobar broncho-pneumonia, with serious nervous symptoms, at the autopsy the subarachnoid fluid was found to be remarkably limpid, whilst that obtained by lumbar puncture contained numerous diplococci. This may depend on an initial invasion, followed again, a little later, by a leucocytic reaction, or on an attenuation of the germ virulence—it may be primary, it may be secondary, as happens in a case which terminates favourably, when the turbid fluid becomes limpid, although unfortunately it still contains *in esse* the principle of the selfsame germs. In other cases the nervous syndrome exhibits many complications, not infrequently otitis, so much the more frequent, the more advanced the age of the infant. Rasch, in forty-three autopsies on infants dying from broncho-pneumonia, found otitis in thirty-eight cases, and in thirty-three of these diplococci were present, the proportion corresponding to that given by Netter, Kossel, Cozzolino, &c. The nervous phenomena, as a rule, disappeared with the last trace of pus.

First you come on a perforation of the tympanum, you recognise the otitis by an otoscopic examination, by pressing in front and behind the external orifice of the ear. The infant will give a great shout, and in one case we have known this manœuvre to cause a succession of convulsions. Should the perforation be slow in coming about it is advisable to perform a myringotomy, in order to prevent a further diffusion of the otitic inflammation which might reach the meninges, exciting a true purulent meningitis. But still, without doubt, the otitis may excite meningitis by con-

tiguity, by reflex action, and by its toxic action, with hydrocephalus and acute meningitis. Of our cases otitis was present in Nos. X., XIII., XVII., and XXI. In the first two cases we had grave nervous symptoms, in association with otitis, doubtful in the first case, manifestly to be excluded in the second.

Most serious are the nervous phenomena in atrophic, cachectic infants, ending, for the most part, in a state of lethal weakness, pulmonary thrombosis and thrombosis of the large veins, hæmorrhagic infarcts and brain softening. With such symptoms died Cases XVI. and XVIII.

Nephritis persisted after recovery in Case IX., and in three cases terminated in death, XVII., XVIII., and XXII. Sometimes it is found at autopsies, but more often there is found a turbid swelling of the epithelium of the urinary tubes, granules and fatty degeneration of—as a rule—toxæmic origin. In two cases purulent cystitis with *Bacilli coli* appeared as a complication. Both recovered (VI. and VII.)

Pleurisy is a frequent complication of broncho-pneumonia in children. It is said to occur more frequently in the lobar form, but this is contrary to our experience; we found it in one-third of our cases. Sometimes the pleurisy is dry, when it may be recognised by its characteristic superficial dry rubbing sound. It may contribute of itself to the tardy resolution of broncho-pneumonia, as was seen in Cases I. and IX., without seriously adding to the gravity of the prognosis. Both infants recovered. More frequent and more serious is purulent pleurisy, which is always of the diplococcic variety. Revising some tables of statistics, we have found that of 153 cases in infants, the pneumococcus was found in 107, the streptococcus in 26. On the other hand, among 154 cases in adults the pneumococcus was found in 39 cases, and the streptococcus in 68.

We must make exception to the presence of purulent pleurisy of the new-born, which is always of puerperal origin. Indeed, Roger, in 11 cases of infants from one to four weeks old, found the streptococcus seven times, and of 54 cases of new-born infants, collected by Netter, in not one did he find the diplococcus. Streptococcic pleurisy necessitates a much more serious prognosis. Israel, in 22 such cases cured three only, and Netter saved one out of four—a

lower percentage of recoveries than their diplococci patients gave, of whom Netter cured 16 out of 17 patients. We regard more seriously simple pleurisy than that complicating broncho-pneumonia, the prognosis being much more grave, although the pleurisy is of the diplococcic form. Purulent pleurisy complicated five cases of our 24 of broncho-pneumonia (XVII., XVIII., XIX., XX., XXI.); they were of the diplococcic type of Fränkel, and one and all terminated fatally. But in two of the cases the lethal result was principally due to the presence of purulent meningitis; one patient suffered from purulent pericarditis (XIX., XX.). In one case, whilst we diagnosticated broncho-pneumonia and meningitis, we failed to diagnosticate the pleurisy or the pericarditis which not infrequently happens in practice among infants. Whilst it facilitates diagnosis to find a certain quantity of fluid in the pleural cavity (femoral dulness, diminution and disappearance of respiratory sounds, a lessening and obliteration of tactile fremitus), the diagnosis may be made in the earlier stages of the disease, as in Case XVII., but it is almost impossible when a fibro-purulent layer forms. Then neither the Röntgen-rays nor the exploratory needle afford help. Such cases were demonstrated at autopsies (Henoch, Roger). D'Astros and Macè recently met with this condition in six cases, and in one only was it diagnosticated. Still more difficult is the recognition of such a fibrinous layer in pericarditis. In one case (XX.), at the autopsy, we found a layer of fibro-purulent matter closely enveloping a broncho-pneumonic lobule, unaccompanied by any fluid exudation. During life its only sign was an increased dulness. The symptoms resulting from the complication are so various and so variable that in the presence of fibro-purulent layers all the phenomena of auscultation, percussion, and palpation to a greater or less extent disappear, and the rubbing sound of pleurisy can be recognised in the initial stages only. We have thus diagnosticated four out of five cases, an eminently satisfactory result, one which compares favourably with published statistics. A further difficulty in diagnosis is when a collection of pus is encysted at a considerable depth—to wit, in the supraphrenic pleura, or when it is situated between the lobules. The broncho-pneumonia, in such a case, assumes the character of an intermittent fever; if pronounced, it is accompanied by wast-

ing, anæmia, a dry cough, irritating and paroxysmal. It may be mistaken for tuberculosis. Often after a paroxysm of severe coughing the patient vomits the contents of the purulent cavity. If the collection is small, and the opening in the bronchial tube favourably situated for the expulsion of its contents, a spontaneous cure may result, the fever pass off, and the infant regains its normal health. On the other hand, after some days of quiet, the cough begins again, the patient expels some fresh purulent matter, and this succession of refilling the cavity with pus and of vomiting continues. Yet even such cases have recovered in time by the gradual contraction of the sac. In the more severe types, with fœtor of breath and sepsis, vomiting and wasting are very serious, ending in cachexia. Still more unfavourable is the case of a child of tender age in whom the collection is large, in which the vomit, not being expelled, inundates the respiratory lobe, and death results from asphyxia, or follows more slowly from septic broncho-alveolar inflammation. If by careful percussion you are able to localise a zone of deep hypostasis, and on auscultation get varying sounds; following this, if you detect a cavity, empty or full, with gurgling or the amphoric souffle of a cavernous space, the radioscope may give a satisfactory skiagraph. This uncertainty is probably due to the presence of a residual pulmonary thickening, or to an enlargement of peri-bronchial glands. We record a case in which after three to four days of violent coughing, the cough then became quite suddenly sluggish, the fever fell, but the child no longer expelled its sputum, which now was repeatedly swallowed. During the present session we have lectured on this interesting case.

XXVII. An infant, six months old, was admitted to the clinique, suffering from pleurisy of the left side, which followed on broncho-pneumonia commencing in the first month. By two consecutive aspirations we removed 70 to 80 cubic cms. of pus containing diplococci; after this the dulness did not recur. Notwithstanding a cessation of the fever, it fell away, the respirations rose to 80, and the cough was troublesome. By means of the radioscope we were able to see and to demonstrate to the students a shadow in the centre of the left side of the thorax opposite to the root of the lung, whilst the upper and the lower zones were clear. We were further able to see that the shadow of the heart lay

well to the right, resting over that of the liver, and with its apex pointing to the right side. From this we concluded that the fluid had not been reproduced in the pleural cavity, but that the shadow was caused by an encysted collection, deeply placed and intra-lobular in site; and that it caused the displacement of the heart and the condition generally. Indeed, under the guidance of the radioscope, we inserted an aspirating needle into the sixth left intercostal space, about three centimetres from the paravertebral line in an upward direction, and after passing two centimetres we drew off 45 cubic cms. of thick yellow pus. The infant was immediately benefited, and after a week's time, as we found no sign of any reproduction of the fluid, the patient was dismissed cured.

XXVIII. Another example of the value of the radioscope is the case of an infant, seven months old, who for twenty days was suffering from a high fever of a remittent type, dyspnoea, and cough. After some days there was an improvement, but with a continuance of the fever, which assumed an intermittent form, with short respirations, sighing, and marked anæmia. The occurrence of the usual symptoms showed the case to be one of diffuse bronchial catarrh, especially severe in the left side; in no part was there loss of voice, no bronchial souffle, no increased vocal resonance, no wheezing, and tactile vibration was normal. The cough for two days was very distressing. The radioscope showed a shadow in the central zone of the left side of the thorax, about three or four cms. from the vertebral column. We decided to make an exploratory puncture in the morning, but that night, after some fits of hard coughing, the child vomited a spoonful of greenish-yellow fetid pus. After this the fever fell, the cough became easier, the shortness of breath passed away, and the radioscope no longer showed a shadow.

XXIX. is an example of the permanence of a vomica, as seen in an infant, four months old, who for some months past has been continually spitting up matter, since an attack of broncho-pneumonia, from which the child suffered two years before. All the symptoms pointed to the presence of cavities in the posterior and inferior regions of the left side of the thorax, with periodic expulsion of most fetid stuff—the breath fetid, feverish all day, continuous wasting. The

fingers and toes were like drumsticks, ending in bulbous extremities, clavate, cyanotic; by the radioscope we saw that the enlargements were made up of all the soft tissues; withal we noticed a slight enlargement of the phalanges and rarefaction of the osseous tissue. This lesion, which Pierre and Marie described under the name *osteopathic-hypertrophic-dilatation* (acromegaly), a condition we still find in chronic bronchitis with bronchiectasis, this, though far from the seat of the obstruction of the circulation, still is excited by the material toxin at the periphery, which is the product of the septic bronchitis. The child was operated on by Dr. Pieri on the 2nd of February, 1912; resection of the sixth and seventh ribs close to the scapula on the left side; fibro-purulent adhesions were stripped from both the superior and inferior lobes of the lung, the lung was then traversed by a Paquelin's cautery; with his finger the surgeon penetrated a system of multiple cavities; breaking down the divisions he converted them into one great cavity, in which he fixed two drainage tubes. The result was all that we had hoped for; perhaps it may become necessary to operate again to open another cavity, which escaped notice during the operation, and to insert a drainage tube sufficiently large to allow of free drainage.

(To be concluded.)

LITERARY INTELLIGENCE.

IN view of the interest evoked amongst the profession with regard to the National Insurance Act of 1911 and other medical legislation, a new work from the pen of Dr. Fred. J. Smith, of the London Hospital, is opportune. It is entitled "Law for Medical Men," and contains extracts from such Acts of Parliament as especially apply to them. The book, which will be on sale immediately, contains 400 pages, and bears the imprint of J. & A. Churchill. Another book to be issued by the same firm is "Practice and Problem in Abdominal Surgery," by Mr. Alfred E. Maylard, Surgeon to the Victoria Infirmary, Glasgow. In the words of the preface—"The book is the outcome of the practical experience of one who knew abdominal surgery at its inception, who has passed through its varied phases of development, and who, at present, is enjoying that apparent apotheosis which it seems almost to have reached."

SANITARY AND METEOROLOGICAL NOTES.

VITAL STATISTICS

For four weeks ending Saturday, November 30, 1912.

IRELAND.

THE average annual death-rate represented by the deaths—exclusive of deaths of persons admitted into public institutions from without the respective districts—registered in the week ended November 30, 1912, in the Dublin Registration Area and the twenty-one principal provincial Urban Districts of Ireland was 19.7 per 1,000 of their aggregate population, which for the purposes of these returns is estimated at 1,154,150. The deaths registered in each of the four weeks of the period ending on Saturday, November 30, and during the whole of that period in the several districts, alphabetically arranged, correspond to the following annual rates per 1,000. In some cases, owing to the deaths not having been registered within the week in which they occurred, the rates do not fairly represent the weekly mortality :—

Towns, &c.	Week ending				Average Rate for 4 weeks	Towns, &c.	Week ending				Average Rate for 4 weeks
	Nov. 9	Nov. 16	Nov. 23	Nov. 30			Nov. 9	Nov. 16	Nov. 23	Nov. 30	
2 Town Districts	17.9	17.0	18.5	19.7	18.3	Lisburn -	21.0	8.4	12.6	8.4	12.6
Armagh -	21.3	7.1	28.4	35.4	23.0	Londonderry	16.6	10.2	16.6	19.1	15.6
Ballymena	22.9	4.6	18.3	22.9	17.2	Lurgan -	20.8	16.6	12.5	20.8	17.7
Belfast -	16.8	16.1	18.4	18.5	17.5	Newry -	21.8	21.8	17.4	21.8	20.7
Donmell -	5.1	30.6	25.5	25.5	21.7	Newtownards	21.8	16.3	10.9	21.8	17.7
Dork -	15.6	15.6	12.9	18.4	15.6	Portadown -	17.8	8.9	8.9	13.3	12.2
Drogheda -	33.4	4.2	12.5	16.7	16.7	Queenstown	6.4	12.7	12.7	6.4	9.6
Dublin -	18.0	18.7	20.2	18.9	18.9	Sligo -	32.7	9.3	4.7	14.0	15.2
Dundalk -	35.7	19.9	11.9	55.6	30.8	Tralee -	15.2	10.1	—	25.3	12.7
Dunlway -	17.8	23.6	7.9	31.5	18.7	Waterford -	13.3	19.0	17.1	32.3	20.4
Wilkenny -	5.0	14.9	14.9	9.9	11.2	Wexford -	18.1	—	13.6	13.6	11.3
Wimerick -	28.4	35.2	42.0	27.1	33.2						

The deaths (excluding those of persons admitted into public institutions from without the respective districts) from certain epidemic diseases registered in the 22 districts during the week ended Saturday, November 30, 1912, were equal to an annual rate of 2.3 per 1,000—the rates varying from 0.0 in eleven of the districts to 27.8 in Dundalk, 7 of the 14 deaths from all causes for that district being from measles. Among the 139 deaths from all causes registered in Belfast are 15 from measles, 2 from diphtheria, and 6 from diarrhœa. Of the 27 deaths from all causes registered in Cork, one is from scarlet fever and one from dysentery. Included in the 15 deaths from all causes registered in Londonderry are one from diphtheria and one from diarrhœa. Three deaths from measles are included in the 20 deaths recorded for Limerick, and one of the 8 deaths for Galway is from enteric fever. One of the 4 deaths registered in Drogheda is from whooping-cough, and of the 5 deaths registered in Tralee one is from measles and one from diarrhœa.

DUBLIN REGISTRATION AREA.

The Dublin Registration Area consists of the City of Dublin as extended by the Dublin Corporation Act, 1900, together with the Urban Districts of Rathmines, Pembroke, Blackrock and Kingstown. The population of this area is 400,865, that of the City being 306,573, Rathmines 38,495, Pembroke 29,731, Blackrock 9,125, and Kingstown 16,941.

In the Dublin Registration Area the births registered during the week ended November 30 amounted to 197—103 boys and 94 girls—and the deaths to 158—85 males and 73 females.

DEATHS.

The registered deaths, omitting the deaths (numbering 13) of persons admitted into public institutions from localities outside the Area, represent an annual rate of mortality of 18.9 per 1,000 of the population. During the forty-eight weeks ending with Saturday, November 30, the death-rate averaged 20.5, and was 1.5 below the mean rate for the corresponding portions of the 10 years 1902–1911.

The total deaths registered, numbering 158, represent an annual rate of 20.6 per 1,000. The annual rate for the past forty-eight weeks was 21.8 per 1,000, and the average annual

rate for the corresponding period of the past ten years was 23.1 per 1,000 of the mean population for all deaths registered.

The total deaths from all causes included 2 from enteric fever, 1 from typhus, 3 from measles, 1 from scarlet fever, 2 from influenza, and 2 deaths from diarrhoea and *enteritis* of children under 2 years of age.

In each of the 3 preceding weeks, deaths from enteric fever were 2, 2, and 1; deaths from typhus were 0, 0, and 0; deaths from measles were 1, 0, and 0; deaths from scarlet fever were 0, 0, and 1; deaths from influenza were 0, 1, and 1; and deaths from diarrhoea and *enteritis* of children were 5, 3, and 8 respectively.

There were 35 deaths from tuberculosis. This number includes 24 deaths from pulmonary tuberculosis, 5 from tuberculous meningitis, 2 from abdominal tuberculosis, 2 from tuberculosis of the vertebral column, and 2 deaths from disseminated tuberculosis. In each of the three preceding weeks, deaths from tuberculosis in general numbered 24, 24, and 31.

Of 10 deaths from pneumonia, broncho-pneumonia caused 7 deaths, lobar pneumonia one death, and *pneumonia* (type not distinguished) caused 2 deaths.

Organic diseases of the heart caused the deaths of 15 persons, and 19 deaths from bronchitis were recorded.

Eight deaths were caused by cancer.

There were 5 deaths of infants under one year of age from *convulsions*.

Prematurity caused the deaths of 4 infants, and there were 2 deaths from congenital debility.

There was one death from exposure to cold, and one homicidal death.

In 4 instances the cause of death was "uncertified," there having been no medical attendant during the last illness. These cases include the death of one infant under one year of age.

Thirty-six of the persons whose deaths were registered during the week ended November 30 were under 5 years of age (28 being infants under one year, of whom 5 were under one month old), and 42 were aged 65 years and upwards, including 31 persons aged 70 and upwards. Among the latter were 15 aged 75 years and upwards, of whom 3 (2 males and one

female) were stated to have been aged 90, 90, and 92 years, respectively.

The Registrar-General points out that the names of the cause of death printed above in italics should be avoided whenever possible in Medical Certificates of the Cause of Death.

STATE OF INFECTIOUS DISEASE IN THE DUBLIN REGISTRATION AREA AND IN BELFAST.

The usual returns of the number of cases of infectious diseases notified under the "Infectious Diseases (Notification) Act, 1889," and the "Tuberculosis Prevention (Ireland) Act, 1908," as set forth in the following table, have been furnished by Sir Charles A. Cameron, C.B., M.D., Medical Superintendent Officer of Health for the City of Dublin; by Mr. Fawcett,

TABLE SHOWING THE NUMBER OF CASES OF INFECTIOUS DISEASES notified in the Dublin Registration Area (viz.—the City of Dublin and the Urban Districts of Rathmines and Rathgar, Pembroke, Blackrock, and Kingstown), and in the City of Belfast, during the week ended November 30, 1912, and during each of the preceding three weeks. An asterisk (*) denotes that the disease in question is not notifiable in the District.

CITIES AND URBAN DISTRICTS	Week ending	Measles	Rubella, or Epidemic Rose Rash	Scarlet Fever	Typhus	Relapsing Fever	Diphtheria	Membranous Croup	Pyrexia (origin uncertain) ^a	Enteric or Typhoid Fever	Erysipelas	Puerperal Fever	Whooping-cough	Cerebro-spinal Fever	Tuberculous Phthisis (<i>Pulvisia</i>)	Acute Polio-myelitis	Total
City of Dublin	Nov. 9	•	•	12	-	-	9	-	-	10	2	-	•	-	10	-	49
	Nov. 16	•	•	10	-	-	•	-	-	9	2	-	•	-	13	-	41
	Nov. 23	•	•	6	1	-	3	-	1	5	1	-	•	-	12	-	29
	Nov. 30	•	•	7	-	-	•	-	-	3	2	-	•	-	11	-	36
Rathmines and Rathgar Urban District	Nov. 9	•	•	4	-	-	3	-	-	1	-	-	•	•	•	•	8
	Nov. 16	•	•	1	-	-	3	-	-	1	1	-	•	•	•	•	5
	Nov. 23	•	•	6	-	-	3	-	-	1	1	-	•	•	•	•	10
	Nov. 30	•	•	2	-	-	1	-	-	-	1	-	•	•	•	•	4
Pembroke Urban District	Nov. 9	-	-	2	-	-	-	-	-	1	-	-	-	-	-	•	3
	Nov. 16	-	-	-	-	-	-	-	-	2	1	-	-	-	-	•	3
	Nov. 23	-	-	1	-	-	-	-	-	-	-	-	-	-	-	•	1
	Nov. 30	-	-	-	-	-	-	-	-	-	1	-	3	-	-	•	4
Blackrock Urban District	Nov. 9	•	•	2	-	-	-	-	-	-	-	-	•	-	•	•	2
	Nov. 16	•	•	1	-	-	-	-	-	-	-	-	•	-	•	•	1
	Nov. 23	•	•	2	-	-	-	-	-	-	1	-	•	-	•	•	3
	Nov. 30	•	•	2	-	-	1	-	-	-	-	-	•	-	•	•	5
Kingstown Urban District	Nov. 9	•	•	3	-	-	1	-	-	-	1	-	•	-	2	•	7
	Nov. 16	•	•	2	-	-	-	-	-	-	-	-	•	•	1	•	3
	Nov. 23	•	•	-	-	-	-	-	-	-	-	-	•	•	-	•	-
	Nov. 30	•	•	2	-	-	-	-	-	-	1	-	•	•	1	•	4
City of Belfast	Nov. 9	•	•	22	-	-	6	-	1	-	8	-	•	•	7	•	44
	Nov. 16	•	•	28	-	-	4	-	-	1	2	-	•	•	7	•	42
	Nov. 23	•	•	28	-	-	4	-	-	1	4	-	•	•	8	•	45
	Nov. 30	•	•	21	-	-	12	-	-	3	5	-	•	•	6	•	45

^a Continued Fever.

Executive Sanitary Officer for Rathmines and Rathgar Urban District; by Mr. Manly, Executive Sanitary Officer for Pembroke Urban District; by Mr. Heron, Executive Sanitary Officer for Blackrock Urban District; by the Executive Sanitary Officer for Kingstown Urban District; and by Dr. Bailie, Medical Superintendent Officer of Health for the City of Belfast.

CASES OF INFECTIOUS DISEASES UNDER TREATMENT IN DUBLIN HOSPITALS.

During the week ended November 30, 1912, one case of measles was discharged from hospital and 4 cases remained under treatment at the close of the week. In the three preceding weeks such cases were 4, 6, and 5 respectively.

Eighteen cases of scarlet fever were admitted to hospital, 20 were discharged, there was one death, and 119 cases remained under treatment at the close of the week. This number is exclusive of 14 convalescent patients who remained under treatment at Beneavin, Glasnevin, the Convalescent Home of Cork Street Fever Hospital, Dublin. At the close of the 3 preceding weeks the cases in hospital were 131, 122, and 122 respectively.

Seven cases of diphtheria were admitted to hospital, and 14 were discharged. The cases in hospital, which at the close of the 3 preceding weeks numbered 73, 79, and 68 respectively, were 61 at the close of the week.

Four cases of enteric fever were admitted to hospital, 6 were discharged, there was one death, and 49 cases remained under treatment in hospital at the close of the week, the respective numbers in hospital at the close of the three preceding weeks being 52, 57, and 52.

In addition to the above-named diseases, 7 cases of pneumonia were admitted to hospital, 11 were discharged, there were 2 deaths, and 22 cases remained under treatment at the end of the week.

ENGLAND AND SCOTLAND.

The mortality in the week ended Saturday, November 30, in 95 large English towns (including London, in which the rate was 14.5) was equal to an average annual death-rate of 14.5 per 1,000 persons living. The average rate for 18

principal towns of Scotland was 17.1 per 1,000, the rate for Glasgow being 20.5, and that for Edinburgh 15.6.

INFECTIOUS DISEASE IN EDINBURGH.

The Registrar-General has been favoured by A. Maxwell Williamson, M.D., B.Sc., Medical Officer of Health for Edinburgh, with a copy of his Return of Infectious Diseases notified during the week ended November 30. From this Report it appears that of a total of 53 cases notified, 24 were of phthisis, 12 of scarlet fever, 9 of erysipelas, and 8 of diphtheria. Among the 356 cases of infectious disease in hospital at the close of the week were 157 of scarlet fever, 91 of phthisis, 54 of diphtheria, 14 of whooping-cough, 11 of erysipelas, 9 of measles, 3 of enteric fever, 13 of chicken-pox, and one of puerperal fever.

METEOROLOGY.

Abstract of Observations made in the City of Dublin, Lat, 53° 20' N., Long. 6° 15' W., for the Month of November, 1912.

Mean Height of Barometer, - - -	30.005 inches.
Maximal Height of Barometer (1st, at 9 p.m.),	30.450 ..
Minimal Height of Barometer (26th, at 9 a.m.),	28.918 ..
Mean Dry-bulb Temperature, - - -	44.6°.
Mean Wet-bulb Temperature, - - -	42.9°.
Mean Dew-point Temperature, - - -	40.8°.
Mean Elastic Force (Tension of Aqueous Vapour),	.263 inch
Mean Humidity, - - - - -	86.7 per cent.
Highest Temperature in Shade (on 7th), -	64.2°.
Lowest Temperature in Shade (on 30th), -	27.0°.
Lowest Temperature on Grass (Radiation) (30th),	25.0°.
Mean Amount of Cloud, - - - -	58.7 per cent.
Rainfall (on 14 days), - - - -	1.438 inches.
Greatest Daily Rainfall (on 24th), - - -	.370 inch.
General Directions of Wind, - - -	W., S.W., N.W.

Remarks.

An average month in late autumn, with alternate cold and warm spells, a moderate rainfall, and many fine if dull days, and a great preponderance of westerly wind. During the first three days an anticyclone drifted slowly eastwards across the British Isles, and its calms were attended by low temperatures. On the 4th and 5th a secondary V-shaped

depression caused heavy rains in Ireland, Wales, and Scotland, On the 7th temperature rose to 64° at Birr Castle and in Dublin, as the S.W. wind of a large and deep depression centred near Iceland swept over Ireland. This warm spell gave way after a fresh S.W. gale on the 10th, the wind veering to N.N.W. as the cyclonic centre passed in a south-easterly direction across the North Sea to the Netherlands and Germany. In the wake of this disturbance a vast anticyclone spread in from the Atlantic, its oceanic N.W. winds bringing a much higher temperature. Generally fine weather now prevailed until Monday, the 25th, when the barometer fell rapidly as a series of very energetic cyclonic systems swept in over the British Isles from the Atlantic. Violent gales were felt on all coasts, and at 10 p.m. of the 26th a squall of hurricane force passed over Aberdeen, the wind-velocity being 75 miles an hour. In this storm the barometer sank to 27.93 inches at Wick, the lowest pressure recorded in these islands since March 15, 1905, when 27.91 inches was registered at Malin Head, Co. Donegal. Severe frost set in over Scotland in the wake of this disturbance, the thermometer falling in the screen to 13° at Nairn, 18° at Wick, and 19° at Aberdeen on the early morning of the 29th. This cold-snap subsequently passed all over the country, and snow, sleet and hail fell in many places. At Birr Castle a minimum of 21° F. was recorded on the morning of the 30th.

In Dublin the arithmetical mean temperature (45.3°) was exactly equal to the average (45.3°); the mean dry-bulb readings at 9 a.m. and 9 p.m. were 44.6° . In the forty-eight years ending with 1912, November was coldest in 1878 (M. T. = 38.2°), and in 1910 (M. T. = 40.8°); warmest in 1899 (M. T. = 50.7°), and in 1881 (M. T. = 50.3°).

The mean height of the barometer was 30.005 inches, or 0.145 inch above the corrected average value for November—namely, 29.860 inches. The mercury rose to 30.450 inches at 9 p.m. of the 1st, and fell to 28.918 inches at 9 a.m. of the 26th. The observed range of atmospheric pressure was, therefore, 1.532 inches.

The mean temperature deduced from daily readings of the dry-bulb thermometer at 9 a.m. and 9 p.m. was 44.6° , or 3.3° below the value for October, 1912. The arithmetical mean of the maximal and minimal readings was 45.3° , compared with a

thirty-five years' (1871–1905) average of 45.3° . The mean maximum in the screen was 49.6° , the mean minimum was 40.9° , and the mean minimum on the grass was 38.3° . On the 7th the thermometer in the screen rose to 64.2° —wind, W.S.W.; on the 30th the temperature fell to 27.0° —wind, W.N.W. The minimum on the grass was 25.0° , also on the 30th.

The rainfall was 1.438 inches on 14 days—the rainfall and the rain-days were below the average. The average rainfall for November in the thirty-five years, 1871–1905, inclusive, was 2.720 inches, and the average number of rain-days was 17. In 1888, 6.459 inches fell on 26 days. On the other hand the rainfall in 1896 was only .664 inch on 9 days. In 1911 the rainfall was 3.018 inches on 23 days.

High winds were noted on 5 days, and attained the force of a gale on 3 days—the 10th, 25th and 26th. The atmosphere was foggy in Dublin on the 2nd and 28th. A lunar halo appeared on the 21st, 24th and 25th, and a lunar corona on the 21st, 22nd, 23rd, 24th, 26th and 27th. Hail fell on the 25th and 26th.

The rainfall in Dublin during the eleven months ending Nov. 30th amounted to 25.761 inches on 185 days, compared with 19.404 inches on 163 days in 1911, 15.378 inches on 141 days during the same period in 1887, 24.086 inches on 156 days in 1901, 27.812 inches on 190 days in 1902, 30.015 inches on 212 days in 1903, 20.678 inches on 172 days in 1904, 24.013 inches on 180 days in 1905, 21.001 inches on 185 days in 1906, 24.845 inches on 196 days in 1907, 22.013 inches on 179 days in 1908, 22.531 inches on 172 days in 1909, 29.874 inches on 194 days in 1910, and a thirty-five years' average of 25.750 inches on 181 days.

Mr. C. D. Clark reports that at the Normal Climatological Station in Trinity College, Dublin, the mean height of the barometer was 29.998 inches, the range of atmospheric pressure being from 30.45 inches at 9 p.m. of the 1st to 28.96 inches at 9 a.m. of the 26th. The mean value of the readings of the dry-bulb thermometer at 9 a.m. and 9 p.m. was 45.4° . The arithmetical mean of the daily maximal and minimal temperatures was 45.2° . The screened thermometers rose to 66° on the 7th and fell to 26° on the 30th. The grass minimum

was 20° on the 30th. Rain fell on 13 days to the amount of 1.33 inches, .35 inch being measured on the 4th. The duration of bright sunshine, according to the Campbell-Stokes recorder, was 32.0 hours, giving a daily average of 1.1 hours. The mean temperature of the soil at 9 a.m. was 46.0° at a depth of one foot below the surface of the ground, 48.6° at a depth of 4 feet.

The rainfall at Ardgillan, Balbriggan, Co. Dublin, as recorded by Captain Edward Taylor, D.L., was 1.49 inches, or 1.34 inches below the average for November. The rain-days were 18, or 3 over the average. On the 4th .44 inch was measured. From January 1st the rainfall equalled 28.77 inches on 180 days, being 2.73 inches and 11 days in excess. The thermometer in the screen rose to 56.0° on the 14th, and fell to 29.9° on the 10th. The November rainfall at Ardgillan in recent years has ranged from .92 inch in 1896 to 5.05 inches in 1901.

Mr. T. Bateman reports that the rainfall at The Green, Malahide, Co. Dublin, was 1.305 inches on 13 days—the greatest fall in 24 hours being .405 inch on the 4th. The mean shade temperature was 41.1°, the extremes being—highest, 60° on the 7th; lowest, 21° on the 30th.

At the Ordnance Survey Office, Phoenix Park, Dublin, rain fell on 16 days to the amount of 1.710 inches, the largest measurement in 24 hours being .470 inch on the 4th. The total amount of bright sunshine was 48.9 hours, the most in one day being 6.7 hours on the 1st.

Dr. Christopher Joynt, F.R.C.P.I., registered 1.235 inches on 13 days at Leeson Park, Dublin. The maximum in 24 hours was .330 inch on the 4th. Up to November 30th, the rainfall of 1912 amounted to 25.179 inches on 179 days.

At Cheeverstown Convalescent Home, Clondalkin, Co. Dublin, Miss C. Violet Kirkpatrick recorded a rainfall of 1.77 inches on 19 days. The maximal fall in 24 hours was .55 inch on the 4th.

Dr. A. J. Blake, Resident Medical Superintendent of the Sanatorium of the Dublin Joint Hospital Board, Crooksling, near Brittas, Co. Dublin, returns the rainfall of November at that station as 1.54 inches on 19 days, including a fall of .78 inch on the 4th—the maximum in 24 hours. Snow fell during the afternoon of the 28th, but it was followed by rain

in the evening. Snow again fell in the course of the night, and there was a very slight shower of snow on the evening of the 29th.

Dr. Arthur S. Goff reports that at Belfort House, Dundrum, Co. Dublin, rain fell on 12 days to the amount of 1.01 inches, the greatest measurement in 24 hours being .26 inch on the 24th. The mean temperature in the shade was 45.9° , the range being from 68° on the 7th to 27° on the 28th and 30th.

Mr. George B. Edmondson reports a rainfall of 1.32 inches on 14 days at Manor Mill Lodge, Dundrum, Co. Dublin. The greatest fall in 24 hours was .37 inch on the 25th. The mean temperature of the month was 44.18° . On the 7th the thermometer rose to 63° ; on the 30th it fell to 28° .

In the twenty-four years, 1885 to 1908, the average rainfall of November was 2.880 inches on 16 days at Cloneevin, Killiney, Co. Dublin.

Dr. John H. M. Armstrong, M.B., reports that at Coolagad, Greystones, Co. Wicklow, the rainfall was 1.49 inches on 10 days. Of the total quantity .31 inch fell on the 4th. The temperature on the grass was 25° at 9 p.m. of the 30th.

At Auburn, Greystones, Co. Wicklow, Mrs. Sydney O'Sullivan measured 1.24 inches of rain on 12 days, the heaviest fall in 24 hours being .31 inch on the 25th.

Dr. Charles D. Hanan, M.B., reports a rainfall of 1.11 inches on 9 days at the Royal National Hospital for Consumption for Ireland, Newcastle, Co. Wicklow. The greatest fall in 24 hours was .27 inch on the 25th. The mean temperature for the month was 45.3° , the maximum being 67° on the 7th, and the minimum 28° on the 28th. The mean maximum was 50.2° ; the mean minimum was 40.4° .

At Dunmanway Rectory, Co. Cork, the Rev. Arthur Wilson, M.A., registered a rainfall of 4.86 inches on 17 days, the heaviest fall in 24 hours being .85 inch on the 25th. Other heavy falls were .78 inch on the 4th and .72 inch on the 22nd. The rainfall for the eleven completed months of 1912 amounted to 54.54 inches, compared with an eight years' average of 49.09 inches. With the exception of the 3rd and 4th, the weather was very fine up to the evening of the 22nd. It was also very mild up to the 24th, except on the 1st, 2nd, 11th, 12th and 13th. The last week was very cold. Three inches of snow fell on the morning of the 27th, followed by sharp frost each night to midnight of the 30th. The 21st was remarkably summerlike, and strawberries were ripening.

PERISCOPE.

NEW RADIUM INHALATORIUM AT BATH.

AN important addition to the Bathing Establishment at Bath has been made by the opening, at the end of November, of an Inhalatorium, fitted with specially designed apparatus for the inhalation of the radio-active waters of the famous Hot Springs. Recent investigations of the Hot Springs of Bath, conducted by Sir William Ramsay, K.C.B., F.R.S., have shown these waters to be the richest in Great Britain in Radium, and its even more potent emanation—Niton. Radium in the water of the King's Spring, amounts to 0.1387, niton (radium emanation) in the King's Spring, to 1.73, and niton in natural gas from the King's Spring, to 33.65 milligrammes per million litres. The figures given for niton are the weights of radium capable of forming the niton present in a million litres of water or gas. The Inhalatorium is built immediately adjoining the King's Spring, the largest of the three springs supplying the hot radio-active waters. An interesting view of the King's Bath with the column of steam arising from the spring in the centre is obtained from the window of the Inhalatorium. Before the opening of the new department the members of the City Council and the medical profession accepted the invitation of the Director of the Baths to view the apparatus, and all were loud in their praises of this new departure which makes an important advance in the use of the Bath waters.

UNIVERSITY OF CAMBRIDGE: DIPLOMA IN PSYCHOLOGICAL MEDICINE.

THE Regulations for this newly instituted Diploma have recently been issued. The examination for the Diploma is to be divided into two parts. The first part of the examination will consist of (1) a paper, and (2) a practical and oral examination in the Anatomy and Physiology of the Nervous System; (3) a paper, and (4) a practical and oral examination in Psychology. The second part of the examination will consist of (1) a paper and (2) a clinical and oral examination in Neurology; (3) a paper in Psychiatry, Lunacy Law and

Asylum Administration; (4) a paper containing a choice of subjects for an Essay in Psychiatry; (5) a clinical and oral examination in Psychiatry. Any person whose name is on the Medical Register is admissible to Part I. Candidates for Part II. must, at the time of entering for the Examination, be Registered Medical Practitioners of not less than two years' standing, and must produce evidence of having had twelve months' special clinical experience. The Examination for the Diploma will be held once in each year. In 1913 there will be an Examination for Part I., beginning on Tuesday, June 3rd, and for Part II., beginning on Tuesday, July 1st. will be held in London during March or April. In 1914 and in subsequent years the Examination for Part I. will be held at Cambridge during May or June; that for Part II. Every candidate will be required to pay a fee of six guineas before admission or re-admission to either Part of the Examination. A candidate who has passed both Parts of the Examination to the satisfaction of the Examiners will receive a Diploma testifying to his competent knowledge of Psychological Medicine. All applications for information respecting this Examination should be addressed to Dr. C. S. Myers, the Psychological Laboratory, Cambridge.

LITERARY NOTE.

MESSRS. J. & A. CHURCHILL, of London, announce the following new works and new editions:—"A History of Chemistry, from the Earliest Times till the Present Day." By the late James Campbell Brown, D.Sc. (Lond.), LL.D. (Abdn.), Professor of Chemistry at Liverpool University. With a frontispiece portrait of the Author, and 106 Illustrations. "Notes on Chemical Research: An Account of Certain Conditions which apply to Original Investigation." By W. P. Dreaper, F.I.C., F.C.S. With a frontispiece portrait of Michael Faraday. (This is the first of a series of textbooks of Chemical Research and Engineering, just about to be published.) "A Text-book of Anatomy for Nurses." By Elizabeth R. Bundy, M.D., Member of the Medical Staff of the Woman's Hospital, Philadelphia. Second Edition, with much additional matter and new Illustrations. "Who's Who in Science (International) 1913." Edited by H. H. Stephenson. Containing biographies of the leading followers

of the following sciences :—Agriculture, Anatomy, Anthropology, Astronomy, Bacteriology, Botany, Chemistry, Engineering, Forestry, Geography, Geology, Mathematics, Medicine, Meteorology, Mineralogy, Pathology, Pharmacology, Physics, Physiology, Psychology, Surgery, Zoology. Including also a comprehensive list of the world's Universities, a classified Index, and a list of the Scientific Societies throughout the World. 500 pages. Much enlarged.

“ BEDROCK.”

THE current (January) number of “ Bedrock,” completing the first year of its publication, contains a number of important articles—notably :—“ The Warfare Against Tuberculosis,” by L. E. Metchnikoff, translated by Sir E. Ray Lankester, F.R.S.; “ The Milk Problem,” by Eric Pritchard; “ Science and Spiritualism,” by Sir Bryan Donkin; “ How could I Prove that I had been to the South Pole?” by H. H. Turner, F.R.S.. Other interesting articles are from the pens of Professor J. Joly, F.R.S.; Ivor Tuckett, M.D., and others.

NEW PREPARATIONS AND SCIENTIFIC INVENTIONS.

“ *Tabloid* ” *Thyroid Gland*, gr. 1/10 and gr. $\frac{1}{4}$.

IN thyroid medication the dose of thyroid gland has usually been regarded as 3 to 10 grains, and is so given in the majority of books on the subject. Recently, however, certain authorities have stated that as the result of extensive clinical trials they have found doses of gr. 1/10 to gr. 1 equally satisfactory. To provide for this new system of dosage two additional strengths—gr. 1/10 and gr. $\frac{1}{4}$ —of “ *Tabloid* ” *Thyroid Gland* have been issued by Messrs. Burroughs Wellcome & Co. A large number of the most brilliant results recorded in the literature of thyroid therapy have been obtained with “ *Tabloid* ” *Thyroid Gland*, which has been proved to be an exceedingly active and reliable preparation. It is standardised by chemical means so as to ensure that the desiccated gland substance, of which each product represents a definite amount, contains not less than 0.2 per cent. of iodine in organic combination. With the increased range

of dosage afforded by the two new products, it will now be even more serviceable than before. "Tabloid" Thyroid Gland, gr. $\frac{1}{10}$ and "Tabloid" Thyroid Gland, gr. $\frac{1}{4}$, are both issued in bottles of 100 products. The strengths in which "Tabloid" Thyroid Gland is issued now include gr. $\frac{1}{10}$, gr. $\frac{1}{4}$, gr. $\frac{1}{2}$, gr. 1, gr. $1\frac{1}{2}$, gr. $2\frac{1}{2}$, gr. 5 : 0.05 gramme, 0.1 gramme, and 0.3 gramme.

Unguentum Thiomet.

THE S. P. Charges Company of Manufacturing Chemists, St. Helens, Lancashire, have recently introduced a specially prepared mineral sulphur ointment, which is stated to be non-poisonous, has no objectionable odour or proneness to rancidity, and does not stain the skin. This really elegant preparation contains sulphur in a combined and dissolved form as well as in a state of suspension, so that it possesses great penetrative properties and forms an ideal ointment for the local treatment of parasitic and eruptive skin affections. It is pliable, and when lightly applied to the affected parts or surface, proves soothing and non-irritating. Thiomet is dispensed in neatly got-up porcelain pots with metallic covers, containing either one ounce or two ounces, and costing either 1s. $1\frac{1}{2}$ d. or 2s. 3d., according to size.

A Daily Register for Tuberculin Treatment.

WE have received from Messrs. Parke, Davis & Co. a copy of their new Daily Register for the use of patients undergoing tuberculin treatment either at a tuberculosis dispensary or in private practice. The Register, which has been introduced at the suggestion of Dr. de Carle Woodcock, of Leeds, is sent out in a varnished envelope which can be washed when necessary. Each sheet meets the requirements of one week, and the observations are entered by the patient ; these are checked by the medical attendant at each visit. The book contains sheets sufficient for a course of treatment lasting six months. The Daily Register should prove convenient to both doctor and patient, provided that the latter is gifted with the degree of intelligence requisite for the accurate recording of the observations. But is the close and constant introspection which the use of this Daily Register involves good for a patient ? We think not.

PLATE XII.

DR. R. D. PUREFOY on "*A Case of Tubal Pregnancy*"



UNRUPTURED FALLOPIAN TUBE FILLED WITH BLOOD.

- (a) Uterine end of tube.
- (b) Bare area of dissection from broad ligament.
- (c) Abdominal ostium infolded.

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PART I.

ORIGINAL COMMUNICATIONS.

ART. IV.—*A Case of Tubal Pregnancy attended with Serious Symptoms without Rupture.*^a By RICHARD D. PUREFOY, P.R.C.S.I.; ex-Master Rotunda Hospital. (Illustrated.)

NOTWITHSTANDING the large additions made in late years to our knowledge of the history, cause, and treatment of extra-uterine pregnancy in different stages of development, it will be admitted that cases are still met with in which a correct diagnosis is difficult, and sometimes impossible, till the time of operation. Through the kindness of my friend Dr. Macnamara, of Kilmallock, I am enabled to bring before you the history of a case illustrating some of these points.

A healthy young woman, aged thirty-five years, was married in February, and menstruated regularly for three months. The intermenstrual periods were then shortened by two or three days. In September, after an interval of five weeks, she experienced severe pains and passed fluid and clotted blood per vaginam for a

^a Read in the Section of Obstetrics of the Royal Academy of Medicine in Ireland on Friday, November 8, 1912. [For discussion on this paper see p. 47.]

few days. Subsequently much internal soreness was felt, especially when being driven or "jolted" in any way. About three weeks later another attack of severe pain occurred, also attended with slight bleeding, and at the same time micturition became frequent and was attended with difficulty. On making a vaginal examination at this time the uterus was found driven downwards and forwards against the symphysis, and Douglas's space was occupied by a soft and exquisitely tender tumour. The pulse and temperature were normal, but the patient's appearance indicated a marked degree of anæmia. Absolute rest in bed was prescribed, and a mixture containing iron and chloride of calcium with small doses of morphine. Under this treatment steady improvement and relief to all the symptoms ensued, the only remaining sign of the illness, so far as the patient knew, being a brownish discharge, which persisted for several weeks.

Early in December the patient came under my care. At this time the physical signs were much as already described, and the state of general health was good. The brownish discharge still persisted, and a globular swelling, adherent to the surrounding structures, occupied Douglas's space. I advised an operation for the removal of the swelling, and this was carried out a few days later. To my surprise, I found that the tube, distended with blood but still unruptured, formed the tumour in the pelvis, and when the adhesions were broken down its removal was easily effected, and was followed by an easy and satisfactory convalescence.

In this instance the history and physical signs strongly suggest an extra-uterine pregnancy, in the course of which rupture of the tube took place, attended with serious loss of blood. On examination of the specimen no rupture can be detected, so that we must conclude the severe pain was due to distention and stretching of the tube by blood. Further, Dr. Rowlette's report informed us that repeated examination of sections taken from the specimen had not enabled him to detect any

trace of foetal structures. Does this fact compel us to give up the theory of tubal pregnancy? I believe not. If an early embryo can be absorbed—and pathologists admit this—surely the same fate may overtake chorionic villi.

In considering this question it may be of some interest to notice some other conditions attended with extravasation of blood in the Fallopian tubes. Simple inflammation of the oviduct may be attended with small hæmorrhages which distend the inflamed walls, and which easily undergo absorption. Torsion of the tube, either alone or with a similar condition of the ovary, and, in rare cases, of the uterus, is generally marked by hæmorrhage into its lumen, and the distention of the tubes which accompanies hæmatocolpos and hæmatometra constitutes one of the greatest dangers in this condition. The opinion has long been held that a pyosalpinx which has caused much dilatation and thickening of the tube walls may in a later stage of its history become converted into a hæmatosalpinx. This change is sometimes made directly; sometimes there is an intermediate stage of hydrosalpinx. The hæmorrhagic metrosalpingitis which sometimes accompanies the development of fibromata not infrequently ends in the formation of hæmatosalpinx.

Another form of blood accumulation—and one especially dangerous—is that which results from atresia or closure of the uterus, vagina, or vulva, thus causing retention of the menstrual fluid. The Fallopian tubes in these cases commonly undergo extreme dilatation, and are liable to bursting or perforation. In other cases the obstruction takes place at the ostium uterinum. When this occurs it does not follow that the tubes will give up their part in the function of menstruation; blood will be poured out into the tubes, and if it does not escape by the ostium abdominale it must accumulate as tubal retention. When we look at the contorted shape of the tube it is not difficult to conceive how easily, under dis-

tention of one part of the tube, further contortion, producing angular flexion, may occur, so as to shut in the contents. This closure is likely to be attended with inflammation of the tube and peritoneal investment, and sometimes by transudation through the walls of the tube, under the combined pressure of the accumulation and the excited contractile efforts of the tubal walls. Such retention may, however, terminate in another way—the watery part of the contained fluid may be absorbed, and the tube, not recovering its pristine form, may assume the condition of a cyst.

There is a good illustration of cystiform dilatation of both tubes from tubal menstrual retention in the "Obstetrical Transactions," Vol. VIII., described by Dr. Meadows. The patient had had fifteen pregnancies, but only one had gone on to term. Menstruation had generally been profuse, and latterly became clotty and painful. She died of extensive peritoneal inflammation, involving the uterus and tubes. These presented cystiform dilatations. No communication was found between those dilatations and the fimbriated extremities, and on the left side the ostium uterinum was quite closed. The dilatations were all filled with a dark, thick, and grumous fluid of a prune-juice colour. This resembles the retained menstrual fluid, and was, no doubt, of a like origin. Wagner also, in the *Monatschrift für Geburtskunde*, 1869, describes a hæmatoma of the Fallopian tube associated with an old blood mass in the pelvis found after death. The tube was dilated only at the seat of the hæmatoma, and there was nothing abnormal in the uterus or ovary.

Nearly sixty years ago Scanzoni wrote:—"It would appear that hæmorrhages are not very rare when the menstrual congestion is extreme; at least we bear in mind three autopsies of women dying during menstruation, in whom was found, in one or both tubes, coagulated blood in small quantity. We ought also to mention here a case of a girl, twenty-two years of age, who died immediately

after the appearance of the courses, with all the symptoms of a very intense peritonitis, and with whom, at the autopsy, no other possible cause of death was found but a hæmorrhage in the left tube, which was very distended. When opened it was found to contain two ounces of semi-fluid blood which communicated by the abdominal orifice with a sanguineous effusion of about sixteen ounces situated in the pelvic cavity."

Rokitansky, in his "Pathological Anatomy," describes similar cases also ending fatally.

Regarding the presence of blood in the Fallopian tubes in cases of uterine pregnancy, Scanzoni writes:—"We will not discuss the justice of the opinion of M. Hoffmann, who affirms that after an abortion, or even a delivery at term, blood accumulated in the uterus may flow back into the tubes in consequence of the anti-peristaltic contractions of the uterus. We rather think that the cause of these hæmorrhages is the rupture during parturition of one of the vessels of the tube itself. On one occasion we found in the right tube of a woman, who died of puerperal peritonitis, an effusion of blood evidently proceeding from the rupture of a vein situated in the thickness of the wall of the organ." Godelle relates a similar case.

Routh reports a case where the appendages were removed for recurrent mammary cancer in a woman two and a half months pregnant: one tube contained blood.

Keyworth records a fatal case of accidental hæmorrhage, in which, at the autopsy, effusion of blood was found in the walls of both tubes.

Simple inflammation of the oviduct may be attended with small hæmorrhages, which distend the inflamed walls, and which easily undergo absorption. Especially is this likely to occur in the condition termed acute hæmorrhagic salpingitis, and also pachysalpingitis hæmorrhagica. The hæmorrhagic metrosalpingitis, which so often accompanies the development of uterine fibroids, not infrequently ends in the formation of hæmatosalpinx.

Dr. Watson, writing in the *Australasian Medical Gazette*, 1910, describes two forms of a condition of the tubes termed *sactosalpinx hæmorrhagica*. "The commoner is produced as the result of a mild inflammatory process which occludes the ostium of the tube and allows of the retention of the secretion. As a result the tube becomes dilated and thinned, and contains dark, reddish-brown fluid. The second variety is produced by torsion, and the blood is found in the walls and vessels and not in the lumen." The accuracy of this latter statement I am strongly disposed to question, and it is not in accordance with what most writers on the subject state.

The effects of torsion on the tube depend largely on its condition at the time of the occurrence. If it be tolerably healthy intense congestion may be the result, extravasation affecting the walls only. If it be already cystic, containing either serum or pus, torsion may, though not invariably, be followed by bleeding into its cavity.

Pozzi's remarks on the subject generally are well worth quoting. He says:—"Hæmatocele of the tube, or true hæmatosalpinx, means at the same time profound changes in the walls of the tube, which have definitely assumed a cystic conformation as well as a modification of the blood such as occurs in hæmatocele. In a word, it is a stable lesion and not a transitory pathological condition, as is simple extravasation of blood in an inflamed organ."

Two chief varieties of hæmatosalpinx may be described. The first, and more common, is apoplexy of the tube, which may incidentally supervene in the course of a catarrhal inflammation; or, in the course of a menstruation, upset by a change in *régime*, by excessive fatigue, or by a chill. The second variety—the only one that possesses a definite anatomical personality—is characterised especially by the presence of a sac similar to that of pyosalpinx. That this sac may come into existence there must be admitted, I think, either a tubal pregnancy, arrested in its development, or, again, a pre-

ceding pyosalpinx, which has obliterated the fimbriated extremity and thickened the walls in proportion to their dilatation; hæmorrhage then supervening into a pathological cavity, the walls of which are incapable of absorbing, becomes in consequence definitive. Sometimes this change from pyo- into hæmato-salpinx is made directly. Sometimes there is an intermediate stage of hydrosalpinx, and in these cases the liquid contents are clearest and the walls thinnest.

My friend Miss MacIlroy has contributed an important paper on this subject to the *Journal of Obstetrics and Gynæcology* for December, 1910. It contains copious references to the literature of the subject, which has become considerable, and also furnishes interesting details of the microscopic examination of the specimen she reports. Her theory that fibrosis, as found in the uterus and a cause of uterine bleeding, may also be found affecting the oviduct is ingenious, if not probable, and she differs from Pozzi in the view that hæmatosalpinx is more apt to precede than to follow hydrosalpinx and pyosalpinx.

Miss MacIlroy hazards the ingenious conjecture that as "in fibrosis of the uterus hæmorrhage is a common symptom, a similar condition is, therefore, likely to be found in the tubes."

ART. V.—*Interstitial Keratitis*.^a By FREDERICK A. ANDERSON, B.A., M.D., D.P.H., Univ. Dubl.; Late House Surgeon, Royal Victoria Eye and Ear Hospital, Dublin; Assistant Surgeon, Eye, Ear and Throat Hospital for Shropshire and Wales.

OF the numerous forms of non-suppurative keratitis, varieties presenting many minor differences and peculiarities are constantly being described, and only a certain number can be classified as belonging to fixed types. It

^a A Thesis read for the Degree of Doctor of Medicine in the University of Dublin, December, 1912.

is not intended to discuss these rarer forms, but merely to speak of the most common and best known of them—namely, true interstitial or parenchymatous keratitis.

Although this disease is one of the most familiar to ophthalmologists, fresh cases being of almost daily occurrence in the larger clinics, and though its distribution is world-wide, yet in the matter of causation and treatment we stand to-day very much where we stood fifty years ago—a position which is by no means a matter for congratulation.

For our knowledge regarding the ætiology of interstitial keratitis we are mainly indebted to the genius and industry of Sir Jonathan Hutchinson, whose researches proved it to be one of the constant manifestations of inherited syphilis. It thus came to be regarded as pathognomonic of that disease, and as such formed, perhaps, the most striking feature of the so-called “Hutchinson Triad.” The belief, however, that syphilis is the sole ætiological factor has been severely contested of later years with the result that a considerable number of cases are now recognised as of tuberculous origin. In this connection it is interesting to note that over half a century ago Sir William Wilde characterised the affection as a form of what was then called “strumous ophthalmia,” and that this view persisted until the time of Hutchinson’s discovery. Swanzy (1) states that about 30 per cent. of all cases of parenchymatous keratitis are now recognised as purely tubercular, while the remainder are still attributed to syphilis, congenital or acquired. A strong conviction exists in the mind of the writer that of the latter number a great many cases are caused, not by syphilis alone, but by a combination of that disease with tuberculosis. He is well aware that this belief is not generally entertained, and, not being at present able to furnish conclusive proof, must be content to place this view on record in an explicit manner, trusting that sufficient interest may be aroused to stimulate a thorough investigation of the matter.

Occurring as it does in young persons who are otherwise in fair health, and not being *per se* of a dangerous nature, keratitis affords little opportunity for pathological research. It is, therefore, still a matter of discussion whether the condition is the result of a purely toxic action or of a definite infection of the corneal tissue with micro-organisms. The majority of observers incline to the latter belief, in support of which Axenfeld (2) quotes many workers who have demonstrated the spirochæte in the corneas of congenital syphilitics, none of whom, however, were affected with keratitis. He also states authoritatively that the presence of actual tubercles has been proved in cases of tuberculous keratitis. Fuchs (3) records that a form of parenchymatous keratitis has been produced in the cornea of animals by the inoculation of syphilitic material, and that in these cases the spirochæte was demonstrable in the corneas.

On the other hand, Axenfeld (2) also quotes experimental evidence to show that deep inflammation of the cornea may be produced by a toxic action of the aqueous, artificially produced, and also by mechanical irritation of the endothelium.

From evidence of such a conflicting nature it is quite impossible for the clinician to arrive at any definite conclusion.

In support of the contention that the disease is frequently caused in subjects of inherited syphilis, by a superimposed infection with the tubercle bacillus, the writer would submit the following points as worthy of consideration :—

1. The presence of syphilis does not exclude the presence of a co-existent tuberculosis; indeed one might go further and say that the condition of malnutrition so commonly associated with hereditary syphilis may reasonably conduce to tubercular infection.

2. The experiments of Hamburger and Monti (5) proved that the percentage of children found to react to tuberculin during life steadily increased from, roughly, 50 per

cent. to over 90 per cent. between the ages of five and fifteen—the incidence period of interstitial keratitis. This result, which was most carefully observed, has been confirmed by other workers, and refers to school children of presumably fair health.

3. In comparing the symptomology of inherited and acquired syphilis, several striking discrepancies are at once apparent. Hutchinson himself confesses that he is at a loss to explain why “keratitis of a severe type should be so common in inherited syphilis and so rare in the acquired disease.” In another place he states his conviction that, although occurring so long after birth, keratitis must be classified as a secondary symptom. Again, in both acquired and congenital syphilis the occurrence of iritis is a frequent accompaniment of the secondary phenomena, yet though keratitis may appear soon after infection in the acquired form, it never occurs in the congenital disease until the tertiary period.

Now, since the presence of the spirochæte has been demonstrated in corneas which were as yet apparently normal, this unaccountable delay is surely suggestive of a second determining factor. When it is shown, further, that the age period of keratitis corresponds to the age when the percentage incidence to tuberculosis is at its height, the ætiological import of this latter disease must certainly be recognised.

4. The relative frequency of keratitis in females as compared with males is unaccountable on the assumption of a purely specific origin. It could be explained on the basis of a mixed inflection if we accept the figures of Straub (6). These show that in ocular tuberculosis the morbidity among females at the ages of ten and fifteen is greater than that among men in the proportions of 9 : 6 and 11 : 7 respectively.

5. Considered from the point of view of treatment, though the secondary and tertiary symptoms in congenital syphilis are distinctly susceptible to the action of mercury, yet in keratitis its beneficial effect is of the very slightest,

which is not what one would expect in a purely specific lesion. Commenting on this, Fuchs (4) says :—"Unfortunately we must say that, in general, treatment is pretty powerless against the disease. Parenchymatous keratitis even under the most careful treatment runs a course that is not essentially different from what would have been the case without treatment." How ineffectual mercury is to influence the disease is strikingly shown when we see the second eye almost invariably becoming involved while the patient is being actively treated with the drug.

Again, it is remarkable that salvarsan, which has such a rapid action in clearing up the primary, secondary and tertiary manifestations of syphilis, has practically no power to influence interstitial keratitis.

In marked contrast to these two drugs, tuberculin has, in the writer's hands, given remarkably good results. The ocular lesions have almost immediately shown a considerable improvement which has steadily progressed until a complete retrocession of the disease has resulted in a comparatively short space of time.

Until such time as our knowledge regarding the causation of interstitial keratitis is placed upon a sounder basis than at present obtains, the writer would urge the routine use of the tuberculo-diagnostic test in all cases that present themselves for treatment. The test is so easy of application and so free from danger that little excuse exists for its omission, and its adoption by ophthalmologists in general would furnish evidence, the value of which could not be over-estimated.

Of the various diagnostic methods for tuberculosis, that by the subcutaneous injection of Koch's old tuberculin is alone of value in the cases under discussion. Von Pirquet's test is subject to marked limitations, and its reliability is by no means established, while the ophthalmoreaction of Calmette is distinctly contraindicated in the presence of ocular disease. The method of applying the subcutaneous test adopted by the writer is that described

by Axenfeld, and details regarding the technique may be found in his book. Concerning the reaction to the test, however, it is desired to emphasise in the strongest possible manner the necessity of avoiding a focal reaction at the site of the lesion. Mr. Harrison Butler has lately pointed out the danger of such an occurrence, and the writer is in full agreement with him.

Should the inflammatory symptoms be increased as a result of the test, the reaction may to a great extent be controlled by the subconjunctival injection of guaiacol as recommended by Darier (7).

The compulsory avoidance of a focal reaction would appear at first sight to render the test of little use in determining the nature of the lesion, but happily this proof is unnecessary. A no less striking sign of the tuberculous origin is observable a few days after the injection, and to this Mr. Butler has also drawn attention. It is the marked improvement in the local condition which results, its appearance being synchronous with the immunising response to the injection. This is manifested by a decrease in the vascularity and irritation in the eye, with, subjectively, relief from pain, photophobia and lachrymation frequently associated with some improvement in vision. Following the needle-track and general reactions such improvement is a fair proof of the nature of the disease, and is, moreover, an encouragement to proceed with treatment on similar lines in the hope of securing a still further resolution of the condition.

Regarding the treatment of interstitial keratitis by tuberculin the writer may perhaps be excused for giving a short *résumé* of the method which he has employed with success, inasmuch as no previous description of its application to the disease has yet come to his notice. Before doing so, however, he would point out that its applicability is limited to those cases which do not present signs of pulmonary phthisis.

The method is essentially that advocated by Wright, and consists in the employment of small doses of tuber-

culin at long intervals with the aim of obtaining a series of immunising responses, but without producing tolerance. It would appear to be particularly well adapted to the cases we have to deal with, by reason of its simplicity and convenience ; thus, the optimum dose having been once ascertained, no variation from this is necessary, and, since the injections are given at infrequent intervals, the patient need not be confined to bed.

The choice of a tuberculin is perhaps of less importance than the necessity of acquiring a thorough familiarity with the variety one chooses. Riviere and Morland (8), however, advise the use of T.R. or B.E., of which the former has given every satisfaction in the writer's hands. The indication governing the size of the dose is to obtain as marked a general reaction as possible without causing a focal hyperæmia, for the duration and amplitude of the positive phase are directly proportional to the severity of the negative phase. The interval between the doses must be, in the absence of an opsonic determination, a matter of conjecture ; an injection should not be given until the tolerance wave resulting from the previous one has completely waned, and sensitiveness has returned to normal. For this reason the preliminary dose of T.R. is not given for some weeks after the diagnostic injection of old tuberculin. In practice it appears to be quite safe to commence with 0.00001 cc. of T.R., the observed reaction deciding the question of increase to the optimum quantity, and with this amount the interval is about three weeks.

The importance of auxiliary treatment, apart from the use of mydriatics where indicated, has not been sufficiently emphasised in the tuberculin treatment of ocular disease. It is, the writer maintains, the most essential factor in such treatment. Allen (9), speaking of the tuberculo-opsonic index, says that "in tubercular infections of the eyeball, uncomplicated by tuberculosis elsewhere, the index is usually high"; and to explain the apparent anomaly that such cases do not tend to spontaneous cure,

he suggests that the circulation of the eyeball is so poor that sufficient opsonin is not brought to the part. Wright has insisted that it is not sufficient to raise the opsonic index, but in addition, when this has been done, the focus of the disease must be flushed with opsonin-containing body fluids.

The practical application of this doctrine is best carried out by the subconjunctival injection of hypertonic salt solution. By the injection of a 4 per cent. solution twice a week, commencing about four days after each injection of tuberculin, not excluding that of the old tuberculin, the corneal tissues are constantly flooded with fresh lymph at a time when the opsonic index and the antibody content of the blood are greatly exalted. A further action of the subconjunctival injection is the reflex dilatation of the vessels of the ciliary body, as shown by Wessely (10), thereby increasing the secretion of aqueous humour rich in antibodies. The utility of dionin as a lymphagogue also finds a place here for the maintenance of these effects in the patient's home.

The induction of a hyperæmia at the focus of disease is recognised as an essential factor in the vaccine treatment of localised affections of other parts of the body, and surely its importance is manifest in dealing with an avascular structure like the cornea. In spite of this, the use of these adjuvants in association with vaccine therapy in eye disease appears to have been completely neglected. The auxiliary treatment described above may be modified to suit any method of dosage, and, with a few obvious exceptions, is applicable to all cases.

In an affection of the cornea such as interstitial keratitis the active continuance of the morbid process, even for a short period, may inflict irreparable damage. The softening which occurs in the texture of the corneal tissue prepares it to yield to any increase of tension from within, while the amount of cicatrization produced depends on the duration and intensity of the infiltration. Both of these undesirable consequences may be completely

obviated by securing an early resolution of the infiltration. Since under the action of mercury the disease proves so intractable, we should not disdain to investigate any method of treatment which holds out the slightest hope of advancement. The success which has resulted from the foregoing combined treatment in cases of interstitial keratitis associated with hereditary syphilis has encouraged the writer to put forward the hypothesis enunciated above, and having recorded this he must perforce be content to leave its confirmation, in the phrase of Sydenham, to "time the discoverer of truth."

[I desire to express my best thanks to Mr. Russ Wood for his kindly help and encouragement and for allowing me to make use of his cases for the purpose of investigation.—F. A. A.]

REFERENCES.

- (1) Diseases of the Eye. 10th ed. P. 146.
- (2) Bacteriology of the Eye. P. 361 *et seq.*
- (3) Ophthalmology. 4th ed. P. 281.
- (4) *Ibid.* P. 277.
- (5) Quoted by Riviere and Morland. P. 176.
- (6) Ophthalmoscope. Nov., 1912.
- (7) Ophthalmic Therapeutics. P. 70.
- (8) Tuberculin Treatment. P. 197.
- (9) Vaccine Therapy. 3rd ed. P. 58.
- (10) Quoted by Darier. P. 45.

ART. VI.—*The Sanatorium Benefit in Ireland.*^a By
ROBERT J. ROWLETTE, M.D., M.R.C.P.I., Physician
to Jervis Street Hospital.

THE National Insurance Act has inaugurated a new movement against tuberculosis, and it is of the utmost importance that the movement should be directed on right lines. Without the hearty co-operation of the medical profession this is impossible, and it is, in the first place, necessary that we should carefully study the opportunity

^a Read before the Section of State Medicine in the Royal Academy of Medicine in Ireland on Friday, January 17, 1913.

now open to us, and consider in what way we can best assist in this important work.

Let me say as preface that as regards this benefit, neither in the Act itself, nor in the regulations yet issued, nor in the line of action officially recommended, is there anything to which we as a profession have any cause of objection. The benefit can be administered in a manner consonant with our professional wishes, and if it fails to be so administered, much of the responsibility will rest on our own apathy and carelessness.

The sanatorium benefit, so called, is, as regards Ireland, the first benefit provided under the National Insurance Act. It is defined (Section 8 (1) (b) as "treatment in sanatoria or other institutions or otherwise when suffering from tuberculosis, or such other diseases as the Local Government Board, with the approval of the Treasury, may appoint." It is to be noted, in the first instance, that the benefit is not confined, as the name unfortunately suggests, to sanatorium treatment. The treatment is to be in sanatoriums or other institutions or otherwise; that is to say, it may be of any kind thought proper. In the second place, the benefit may be extended to the treatment of other diseases than tuberculosis, if the Local Government Board think fit. No suggestion of such extension has, however, yet been made, nor is any extension likely to be made, in the immediate future. We may, therefore, at present discuss the benefit as if it were solely concerned with the treatment of tuberculosis.

The administration of the sanatorium benefit is in the hands of the Insurance Committees, the Societies having no share in it. The institutions patronised by the Insurance Committees, and the extra-institutional treatment provided, must be approved by the Local Government Board, and all the arrangements must be made to the satisfaction of the Insurance Commissioners.

To meet the expenses of the sanatorium benefit, the Insurance Committee will have an annual income of 1s. 3d. for each insured person in its district. It is roughly

estimated that for the City of Dublin this will work out in the present year as £3,175. This sum may be augmented by grants from local authorities.

An insured person is not entitled to sanatorium benefit unless the Insurance Committee recommend him for such benefit. The benefit may be extended at the will of the Insurance Committee to the dependents of insured persons, or any particular class of such dependents. If the Insurance Committee thus extend the benefit to dependents, and find their income insufficient to meet the expenses, the County or County Borough Council on the one hand and the Treasury on the other may between them contribute the deficit. This is a brief summing up of the clauses of the Act dealing with sanatorium benefit.

Let us next consider the machinery by which the benefit is administered. An insured person, believing himself to be suffering from tuberculosis, obtains from the clerk of the Insurance Committee of his area a form of application and a form for medical report. He fills his application, and his ordinary medical attendant fills the medical report. These forms, together with evidence of the claimant being an insured person, or a dependent, as the case may be, are forwarded to the Insurance Committee. If the Insurance Committee recommend the patient for benefit, the medical report is sent to the medical adviser of the Committee, who in most cases examines the patient, and whose duty it is to recommend the form of treatment he thinks advisable. That is to say, he advises whether the case is one for institutional or extra-institutional treatment, and if for institutional, whether it is one for a sanatorium, a surgical hospital, a dispensary, or any other institution. On the advice of the medical adviser the Insurance Committee gives the order as to the particular treatment to be followed.

It is to be noted that the Insurance Committee, though the body responsible for the administration of the benefit, cannot itself provide treatment. It can only make arrangements with persons or local authorities undertaking

treatment. Moreover, the manner of the treatment must be approved by the Local Government Board.

The unfortunate term "sanatorium" in the statutory name of the benefit has misled the public, many members of the profession, and not a few of the officials, into imagining that the object of the benefit is to send patients to sanatoriums. It cannot be borne too clearly in mind that sanatorium treatment is only one part, and necessarily a small part, of the sanatorium benefit. It is open to Insurance Committees, within the funds at their disposal, to give whatever treatment Modern Medicine thinks advisable. In the direction of this treatment great responsibility rests with the medical advisers of the Insurance Committees.

No one maintains nowadays that residence in a sanatorium is the best form of treatment for every case of phthisis, much less for the various other forms of tuberculosis. Nevertheless, in our present state of knowledge many cases are best treated in sanatoriums, and the supply of sanatoriums and other special institutions is in Ireland somewhat deficient.

Under the Tuberculosis Act of 1908, local authorities were empowered to strike a rate for the provision of hospitals or dispensaries for the treatment of tuberculosis of any form. Only two or three sanatoriums have been provided under this Act, and no isolation hospital. In order to encourage County and County Borough Councils to use their powers in this direction, the Treasury last year promised a sum of £145,000 to assist in the provision of the requisite institutions. Before any of the public bodies concerned had realised their interest in the matter, it was announced that the Local Government Board, with whom rested the responsibility for distribution, had handed £25,000 to an irresponsible philanthropic association. It is not clear as yet how far this astonishing diversion of public funds will hamper the local authorities in their duties to the tuberculous of their districts. In spite of this, the grant from the Treasury is having its effects in encourag-

ing the County Councils to provide sanatoriums, though not the more necessary isolation hospitals. It is obvious that until institutions are provided, the Insurance Committees are somewhat hampered in making arrangements for the treatment of the beneficiaries. The Insurance Committees can, of course, make their arrangements either with local authorities or with other persons or bodies, other than Poor Law Authorities, who can give them the facilities they require. Any practical scheme for the future, however, presupposes a close co-operation between the Insurance Committee and the County or County Borough Council. The local authorities should provide institutions for the treatment of tuberculosis generally. The Insurance Committee can then bargain with them for the treatment of those who have been recommended for the sanatorium benefit.

Following, in the main, the lines of the Interim Report of the Departmental Committee on Tuberculosis, I proceed to sketch the scheme suggested.

The chief executive officer of the local authority will be the "chief tuberculosis officer," and it is anticipated that he will act as medical adviser to the Insurance Committee.

The centre of any scheme is the *tuberculosis dispensary*. In each county area there should be one central dispensary, and a number of branch dispensaries. It is a matter worth considering whether in Dublin some of the general hospitals might not conduct tuberculosis dispensaries in their out-patient departments. The dispensary will act as the receiving house and centre of diagnosis, as a clearing house, as a centre for curative treatment, as a centre for after-care, and as an information bureau and educational centre.

The chief tuberculosis officer will in most cases be the superintendent of the central dispensary, and will exercise a supervision over the other dispensaries. He should be assisted preferably by whole-time officers, but in the case of the smaller dispensaries the assistance may be more

readily given by medical men of the neighbourhood. The dispensary officers, as such, should undertake no home treatment, but they should be available for consultation with practitioners. No patient should be received at the dispensary except on the recommendation of a practitioner.

Though the entire system centres round the dispensary, the essential part of the tuberculosis work must be the *home treatment*. I am glad to find this point urged by Sir John Moore in his paper in the January number of *The Practitioner*. The majority of people suffering from tuberculosis are competent to do some work, and but few of them can afford to leave their work altogether. Some of them will have been in institutions and have returned home. This home life must be under constant supervision, even more for the sake of their associates than for their own. This supervision must be in the hands of those who know them and their conditions of life; in a word, in the hands of the general practitioner or family doctor.

From another point of view, it is all-important to interest the general practitioner in the campaign. This can only be done by entrusting him with a definite share in the work—work, too, which he can do best. It is satisfactory to find that the Departmental Committee insist strongly on this point. In Great Britain, the Chancellor of the Exchequer has promised to ear-mark—as remuneration for the practitioner—6d. of the 1s. 3d. applicable to the entire benefit, but, for some unknown reason, he has not applied this condition to Ireland. The practitioner must feel himself free to avail himself, when he thinks fit, of the assistance of the tuberculosis officer, or dispensary staff, either in a conjoint visit to the patient's home, or by sending the patient to the dispensary.

We next come to the function of the *sanatorium* itself. Its utility will be, as at present, for patients in the earlier stages of pulmonary disease. The cases for sanatorium treatment must be carefully chosen. Only those likely to benefit should be sent, as otherwise much needed money will be uselessly spent. On the return of patients from

the sanatorium, they must be put under the care of their medical attendant, who will carry out the treatment suggested in consultation by the chief tuberculosis officer.

For other than pulmonary cases provision has also to be made in institutions. Many patients require surgical treatment such as can be given only in a surgical hospital. It is here that our *general hospitals* can give most help. There are, of course, some medical conditions for which they can also cater. I am glad to know that several of the Dublin hospitals have expressed their willingness to assist Insurance Committees by placing at their disposal a certain number of beds at a reasonable rate for maintenance.

The last of the series of institutions concerned in the treatment of tuberculosis is by no means the least important—the *isolation hospital* or home for incurable cases. Even with the most careful system of home treatment, patients will be encountered who cannot be comfortably cared for at home, who are a positive danger to their associates, and who are past hope of cure. There is at present no provision whatever for them, outside a few beds in two homes in Dublin. As far as I can learn no County or County Borough Council has, as yet, considered making provision for them, though from the point of view of the public health, the advanced cases are the most important class to control. It is the urgent duty of the Local Government Board to insist that a fair proportion of the £145,000 of the Treasury Grant should be devoted to provision for advanced cases, and it is also the duty of the Insurance Commissioners to press the matter.

I have endeavoured, as briefly as possible, to sketch the outlines of the work which may be undertaken in association with the administration of the sanatorium benefit. I have dwelt on the elementary principles because I believe that up to the present comparatively few have troubled to understand them. If I have dealt with matters familiar to many of you, I can only offer my apologies. My wish has been rather to show what may be done than to dwell on the practical difficulties which have

already arisen or are likely soon to arise. Various legal points of construction of the Act, unexpected hitches from awkward phrasing, misunderstandings as to the relative functions of the Insurance Committees and the Local Authorities—these and various other points may hinder smooth working for the present. All such difficulties are, however, capable of being cleared away if all concerned are anxious to further the work. Most necessary of all is the hearty co-operation of the members of every rank of our Profession.

ALVARENGA PRIZE OF THE COLLEGE OF PHYSICIANS OF
PHILADELPHIA.

THE College of Physicians of Philadelphia announces that the next award of the Alvarenga Prize, being the income for one year of the bequest of the late Señor Alvarenga, and amounting to about One Hundred and Eighty Dollars, will be made on July 14, 1913, provided that an Essay deemed by the Committee of Award to be worthy of the prize shall have been offered. Essays intended for competition may be upon any subject in Medicine, but cannot have been published. They must be typewritten, and if written in a language other than English should be accompanied by an English translation, and must be received by Thomas R. Neilson, M.D., the Secretary of the College, on or before May 1, 1913. Each essay must be sent without signature, but must be plainly marked with a motto and be accompanied by a sealed envelope having on its outside the motto of the paper and within the name and address of the author. It is a condition of competition that the successful essay or a copy of it shall remain in possession of the College; other essays will be returned upon application within three months after the award.

PART II.

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

Tuberculin in the Diagnosis and Treatment of Tuberculosis (Weber-Parkes' Prize Essay, 1909). With Additions by W. CAMAC WILKINSON, B.A. (Syd.), M.D. (Lond.), F.R.C.P.; Late Lecturer in Pathology (1884-1901) and Medicine (1901-1910), University of Sydney. London: James Nisbet & Co., Ltd. 1912. Demy 8vo. Pp. xxiv + 492 (with Charts).

DR. WILKINSON is well known as an advocate of the use of tuberculin, which he has employed since the introduction of old tuberculin by Koch. His enthusiasm frequently causes him to fall foul of other clinicians, and his method of controversy is not always such as one expects to find in a scientific work. Still one forgives an author a great deal when it is evident that his convictions have been arrived at after years of experience and observation. Opinions differ in regard to the contraindications, the dosage, and the methods of administration of the tuberculins in pulmonary tuberculosis, but within the past few years the method practised by Dr. Wilkinson at the Tuberculin Dispensary, Kennington Road, London, has been widely adopted. We dealt recently with this subject when reviewing the work of Dr. Frederick Griffiths, who was a pupil of Dr. Wilkinson in Sydney, and the increase in the number of tuberculin dispensaries in which the treatment is similar to that followed at Kennington Road is evidence that Dr. Wilkinson's ideas are making progress.

In this, the second, edition of the work a chapter had been added on "Mr. Lloyd George's Insurance Bill in Relation to the Treatment of Consumption."

The statistics given of the results of sanatorium treatment in Germany afford ground for much anxious thought,

and will repay study. The sanatorium can touch but the fringe of the problem, and Dr. Wilkinson advocates the tuberculin dispensary as the means for providing treatment for those beneficiaries under the Act who are in the early stage of the disease.

Tumors of the Jaws. By CHARLES LOCKE SCUDDER, M.D., Surgeon to the Massachusetts General Hospital: Lecturer on Surgery at Harvard Medical School. With 353 Illustrations, 6 in Colours. Philadelphia and London: W. B. Saunders Company. 1912. 8vo. Pp. 391.

THIS work is a valuable contribution to the surgical literature of the above subject. Dr. Scudder, with his usual brevity and conciseness, gives a lucid description of jaw tumours and of their correct treatment. The one point to which exception may be taken is the selection of illustrations. Why pick out a picture of a most hideous deformity of the human body to use as a coloured frontispiece?

Clinical Bacteriology and Hæmatology for Practitioners. By W. D'ESTE EMERY, M.D., B.Sc. Lond.; Director of the Laboratories and Lecturer on Pathology and Bacteriology, King's College Hospital, and Lecturer on General Pathology, London School of Medicine for Women; formerly Hunterian Professor, Royal College of Surgeons. Fourth Edition. London: H. K. Lewis. 1912. Demy 8vo. Pp. ix + 274.

Of the third edition of this work we wrote in unqualified terms of praise in the number of the Journal for November, 1908 (Vol. CXXVI., Third Series, No. 443, p. 374). All that is now necessary is to draw attention to the appearance of the fourth edition of an excellent textbook for practitioners on a special and difficult branch of medical science.

The book was first published in 1902, and its career has

been eminently successful. There are no radical changes in the present edition, the alterations being chiefly in matters of detail. The author has, however, much amplified the description of the Wassermann reaction in syphilis, which has of late attained such vast importance in the diagnosis of that disease. He has included also, at pages 100 to 105, an account of a modification of the test which he has devised, and he has added an interpretation of the results of the Wassermann reaction which cannot fail to prove of vital importance to all practitioners. We thoroughly agree with Dr. Emery that practitioners will be well-advised not to attempt their own Wassermann reactions "unless they are possessed of a considerable amount of technical skill, and have more time to spare than is usually the case" (page 105).

Anæsthetics and their Administration. A Text-book for Medical and Dental Practitioners and Students. By SIR FREDERIC W. HEWITT, M.V.O., M.D. The Fourth Edition, prepared with the assistance of HENRY ROBINSON, M.D. London: Macmillan & Co. 1912. 8vo. Pp. xvi + 676.

THE past few years have been exceptionally fruitful in new and good work on the subject of the administration of anæsthetics for surgical procedures. We have evidence of this progress in the work before us which, as the author tells us, "has been rendered imperatively necessary by the extraordinary changes that have recently taken place in the practice of anæsthesia." It is noteworthy that these changes are much more of the nature of additions to our knowledge than the upsetting of opinions previously held. Perhaps the most notable change in recent years is the position taken by the open administration of ether. An unnecessary distinction has, we think, been made between the strictly open system and what our author calls the "perhalation system." The introduction of this new word does not appear to us to serve any useful purpose, and the distinction aimed at by it is more theoretical

than real. By whatever name we choose to call the system there is no doubt of its value, and we are glad to note that Sir Frederic has devoted much more space to the description of it in this edition than he did in 1907. It would seem, however, that he is not yet fully converted to its use, and we anticipate that in future editions he will give it a much more prominent position. Chapters on local anæsthesia and on the medico-legal aspects of surgical anæsthesia are other notable additions to the present edition. The latter subject is one which is of special value, as the information contained in it is not readily available to the practitioner from other sources. It does not, however, seem to us quite suitable that this chapter should be made the medium of propagating the author's views on the necessity of legislation in connection with the administration of anæsthetics. These views may or may not be sound, but they seem to us out of place in a text-book on anæsthetics.

It is unfortunate that the author has not devoted more space to the subject of hedonal infusion anæsthesia. The place that this method is to take in the future is as yet by no means settled, but that it will be largely used in the near future we feel confident, and many will, we fear, be disappointed that the subject is so briefly treated in the book.

Dr. Hewitt's work has established for itself and for its author a great reputation among English-speaking people, which we believe will be materially added to by the present edition.

Life of Sir William Tennant Gairdner, K.C.B., M.D., LL.D., F.R.S.; Regius Professor of the Practice of Medicine in the University of Glasgow. By GEORGE ALEXANDER GIBSON, M.D., Sc.D., LL.D. With a selection of Papers on general and Medical Subjects. Glasgow : James Maclehose & Sons. 1912. 8vo. Pp. xiii, 817, and 5 Plates.

DR. GIBSON has succeeded in making a notable addition

to medical biography in his recently published "Life of Sir William Gairdner." The work is a model of what one would wish such books to be, and brings before us most pleasantly and distinctly the life of the man with which it deals. Such a life, too, is well worth study, so full is it of good work and good citizenship, guided by the highest standard of professional conduct. Gairdner's life was long, but even with its length one is amazed at the vast amount of work which he was able to accomplish. All that work, too, is stamped with the hall-mark of worth, and much of it was, when given to the world, new knowledge which permanently extended the boundaries of our science. In such a life, where all is admirable, it is difficult to pick and choose those parts which one would like to dwell upon, but perhaps one of the most attractive is that which deals with Gairdner's connection with Sanitary Science. In 1863 Gairdner was appointed the first Medical Officer of Health of Glasgow, and in the eight years that he held that office he laid the city of his adoption under an obligation which it is difficult for us now to estimate. In 1864 typhus fever killed 1,138 persons in Glasgow, and yet there was no municipal fever hospital; and in that year the first municipal disinfecting and washing-house was established in the city. Sanitary reform was unpopular, and the medical officer had not only to cope with the terrible conditions existing in the city, but he had also to convert those in authority to the wish for reform. How he did so reads almost like a fairy tale, and gives us some idea of the boundless energy and consummate tact of the man. Before Gairdner laid down the reins of office the Sanitary Committee of the Town Council had become its most popular department, and the methods which he had introduced had effected a reduction of the death-rate to about one-half what it had been.

Though we pick out this one incident in Gairdner's life we can assure our readers there are many others of equal interest, all admirably told by Dr. Gibson, which we strongly recommend to our readers.

Besides the biography the book contains some twenty of Gairdner's papers and a very complete bibliography of his writings.

Just as the notice of this book was written the sad news came to us of the death of its gifted author. In the very prime of life George Alexander Gibson has been called beyond the veil to join his friend and teacher. Those of us who knew Gairdner mourned at his death, just five and a half years ago, but we mourned then for one who died full of honour and full of years. To-day we mourn for his friend, whose brilliant career has been so suddenly cut short, when his great ability seemed just ripening to full fruition. We in Ireland join with our brethren in Scotland in sorrowing for one whom it was our delight to honour and with whom we glory to think our School has been associated, even though that association was the slender tie of honorary academic degree and collegiate fellowship.

THE PEOPLE'S BOOKS.

1. *Marriage and Motherhood.* By H. S. DAVIDSON, M.B., F.R.C.S.E. London and Edinburgh: T. C. & E. J. Jack. No. 21. No date. Pp. 94.
 2. *The Baby.* By a University Woman. London and Edinburgh: T. C. & E. C. Jack. No. 19. No date. Pp. 94.
1. Two new hand-books have been added to "The People's Books" series—namely, "Marriage and Motherhood," by Hugh Davidson, M.B., F.R.C.S.Ed.; and "The Baby," by an anonymous writer who describes herself as a mother and a university woman.

The name of the first of these is rather misleading, as the book really only consists of a description of the course of a normal pregnancy, labour and puerperium, with hints as to their management and hygiene, and a few remarks on the care of the new-born infant. So far as it goes, however, the treatise is very good. It contains

practically all on this subject the expectant mother should know, and the information is clearly and concisely put.

2. The second book contains a great deal of practical advice as to the rearing of healthy children and their management during the various small ailments which may afflict them. It may be said there are too many books of this type, but their value consists in the fact that they are generally the outcome of actual experience, and although the present reviewer has read dozens of them there is generally something new to be found in each.

Both books are admirably produced, and quite keep up the standard of the series.

Diseases of the Liver, Gall-Bladder and Bile-Ducts. By HUMPHRY DAVY ROLLESTON, M.A., M.D. (Cantab.), F.R.C.P., Senior Physician, St. George's Hospital. Illustrated. London: Macmillan & Co., Ltd. 1912. Med. 8vo. Pp. xv + 811.

WE have much pleasure in favourably reviewing this, the second, edition of Dr. Rolleston's work on diseases of the liver. The first edition has established itself as a standard work of reference, and we have no doubt that the present volume, which is thoroughly revised and brought up to date, will fully maintain the reputation of its predecessor. One of the features of the work is the full bibliography which is given in the most convenient form as a list at the bottom of each page, so that reference to the literature is immediately facilitated during perusal of the book. A very fair and sufficiently numerous series of illustrations depict the different pathological conditions described, and in addition there are some admirable coloured plates. Very wisely, we think, the writer has omitted all account of the anatomy and physiology of the liver. Such accounts are in our opinion always out of place, and are necessarily tedious. A clinical teacher should either know the

anatomy and physiology of the organs with which he is dealing, or have at his command works of reference devoted entirely to anatomy and physiology. We hope that the example set in this book will be more widely followed than at present. Throughout the book the clinical aspect of hepatic disease is illustrated by the record of cases, many of which have been observed by the author himself. In this way much interest is added to the narrative. We have read through many of the articles, and have consulted many more, and have invariably found very full information, well arranged and critically discussed.

The size of the book is convenient, the print and general get-up good, and there is a sufficient index. We have no hesitation in recommending the work as a standard book of reference to all medical practitioners.

Diseases of the Genito-urinary Organs and the Kidney.

By ROBERT HOLMES GREENE, A.M., M.D., and HARLOW BROOKS, M.D. Third Edition. Philadelphia and London: W. B. Saunders Company. 1912. 8vo. Pp. 639.

GREENE and Brooks' work is already well known. A great deal of the matter contained in the book is excellent; the illustrations are well done; many of them are new, all are admirably clear. The sections on the examination of the urine and the inflammatory affections of the kidney are particularly well done.

The avowed object of this third edition is to bring the book up to date, but in some instances the authors have failed in explaining clearly new methods of diagnosis and treatment—for instance, segregation of the urine is not at all fully or clearly described; the use of X-rays in the diagnosis of dilatation or other abnormal conditions of the renal pelvis is dismissed with a few lines. The recognition of the *Spirochæte pallida*, by means of dark ground illumination, receives very scant attention.

Tuberculous disease of the kidney is well described;

the diagnosis is put in the clearest possible way. When we come to the treatment of this condition, it is difficult to follow what the authors advise. They must approve of either tuberculin or surgical measures, but seem to rely on fresh air to cure the renal tuberculosis. Under these circumstances it is not altogether surprising that the prognosis in such cases is summed up by the words "you never can tell."

Nisbet's Medical Directory, 1913. In two Parts. Part I. Directory of Medical Practitioners. Part II. The Local Directory. London: James Nisbet & Co., Ltd., 22 Berners Street, W. 8vo. Pp. xx + 954.

FIRST published in 1908, "*Nisbet's Medical Directory*" has year by year steadily won its way in popularity. In the Preface to the first issue its aim was stated to be "to meet the need of a handy, accurate, and inexpensive list of medical men, conveniently and concisely arranged in alphabetical order." How admirably this end has been accomplished we have shown in successive laudatory notices of former editions. One manifest improvement in the Directory for 1913 is the insertion of the full names, as well as surnames, of the vast number of medical practitioners included in Part I. A rough calculation gives that number approximately as 38,400. This statement will bear eloquent testimony to the enormous amount of work incurred in the compilation of the Directory. There are a few—a very few—obsolete statements and a few omissions in the contents of the eight hundred pages of close, yet clear, printing which make up Part I. But there is internal evidence that several of these errata and corrigenda are to be charged against individual medical practitioners rather than against the Editor, who has fulfilled his task with much ability.

The convenient size of the Directory enhances its value as a book of reference. Its price is eight shillings and sixpence net.

PART III.

MEDICAL MISCELLANY.

Reports, Transactions, and Scientific Intelligence.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

President—WALTER G. SMITH, M.D., F.R.C.P.I.

General Secretary—J. A. SCOTT, M.D., F.R.C.S.I.

SECTION OF MEDICINE.

President—J. O'CARROLL, M.D., F.R.C.P.I.

Sectional Secretary—F. C. PURSER, M.D., F.R.C.P.I.

Friday, December 6, 1912.

THE PRESIDENT in the Chair.

Insular Sclerosis.

DR. DEMPSEY showed two cases of this condition. M., aged seventeen, schoolboy. His parents, brothers, and sisters are all healthy. Last January (1912) he noticed that he "made mistakes" in walking, inclined to stumble when turning sharply, walking tired him more than formerly. About the same time occipital headache set in moderately severe, constant, worse in the morning. After the first few weeks the trouble in the legs ceased to progress. On admission to the Mater Hospital on November 7th, 1912, he appeared a healthy, well-grown lad for his age. He walked a little stiffly, but there was no decided ataxia. Romberg's sign moderately marked. No loss of power in the legs; no sensory disturbance; knee-jerks increased; Babinski absent; no ankle clonus; plantar, cremasteric, and abdominal reflexes present; no trophic dis-

orders; no sphincteric derangement. With the exception of well-marked lateral nystagmus, eyes normal; discs normal; hearing, smell, taste normal; arms unaffected; no tremor; intellectual condition good. The chief positive points in the case are:—(1) The age (seventeen years) of the patient; (2) increased knee-jerks; (3) Romberg's sign; (4) nystagmus. Negative points—(1) Absence of any real paralysis; (2) absence of tremor; (3) no pallor of optic discs. The combination of the spinal symptoms and the nystagmus lead him to regard the case as an early one of insular sclerosis. B., aged eighteen, messenger boy. His parents, brothers, and sisters are all healthy. The patient always enjoyed good health. He was operated on for radical cure of femoral hernia in June, 1909. The operation was successful, but two months later he noticed his left leg getting stiff. The left hip joint became very painful, and there were frequent cramps in the left calf. The pains gradually lessened, and disappeared in the course of a few months, but the stiffness in the leg increased. Some six months later the right leg was attacked by the stiffness, but only to a slight extent. *Present condition.*—Left leg rigid and foot scrapes the ground in walking. Right leg similarly affected, but to a much less extent. Both knee-jerks greatly increased. Ankle clonus and Babinski on both sides. Plantar, cremasteric, and abdominal reflexes lost; little real loss of power, the difficulty in walking being due almost entirely to the rigidity of the left leg. Arms unaffected. No disturbance of sensation or of sphincters. Occasional slight nystagmus; optic discs normal; no tremor. This case differs from the preceding chiefly in the much greater prominence of the spastic symptoms and the absence of ataxia. The nystagmus is also much less marked.

DR. DRURY said from an examination of the two patients shown he considered Dr. Dempsey's provisional diagnosis was justified. It was to be expected that owing to the random distribution of the lesion the symptoms produced would also be of a random nature. He, however, noticed that one of the earlier signs—*i.e.*, pallor of the optic disc—was absent in the patients shown. This he considered remarkable. A symptom commonly met with in such cases is a somewhat curious irregularity of micturition. He thought if the patients were questioned this would be discovered.

DR. F. C. PURSER discussed the possibility of the case M. being one of cerebellar disease.

DR. COLEMAN agreed with Dr. Dempsey's diagnosis.

DR. DEMPSEY said he thought that Dr. Purser had succeeded in showing that possibly the case might be one of cerebellar disease, but the diagnosis of insular sclerosis was made by him following the line of least resistance. The want of spasticity in the legs in some cases does not appear at all. He considered the absence of optic neuritis of much more importance. It should not be lost sight of that in insular sclerosis there may be patches of sclerosis in the cerebellum also.

Some Specific Methods of Treating Pulmonary Tuberculosis.

DR. CROFTON read a paper on this subject. He described the treatment of pulmonary tuberculosis by intravenous injections of iodoform dissolved in ether—the technique he gave in detail. When, in exceptional cases, this cannot be done the author recommended its administration intramuscularly or by the mouth. He thought Szendeffy's formula—viz., iodised peptone, menthol and radium—was less effective, but useful sometimes for its tonic effect, and could be usefully used to supplement tuberculin. Dr. Crofton considered no treatment of pulmonary tuberculosis complete unless a course of tuberculin be given to increase the patient's resistance. He mentioned the forms of tuberculin he considered best and a new form of his own, made by dissolving tubercle bacilli in benzoyl-chloride. This is given combined with iodoform by intramuscular injection. The results so far had been very good. Six cases illustrating the treatment of the disease in various stages were described. One case illustrated the fact that even extensive involvement of both lungs, if recent, can be recovered from.

DR. STRANGMAN (Waterford) said that since Dr. Crofton's previous paper had been published she had tried the treatment in two of her cases. The first was one that might have been looked on as a forlorn hope. There were cavities in the left apex, and the right base was the only part of the lungs that could be looked upon as sound. There was loss of appetite, wasting, high temperature, and night sweats and extreme weakness. When the treatment was started

she was much struck with the improvement within the first few days—the night sweats were practically stopped and the sputum was very much diminished; but unfortunately at this stage, in giving one dose very quickly, a cough was brought on which started a hæmorrhage which frightened the patient so much that he would not allow another injection for a week. After this the injections were resumed, and have been kept up since. The sputum has now very much diminished, being about $1\frac{1}{2}$ oz. in the twenty-four hours, the temperature has fallen, and all the other symptoms have improved. The treatment was carried on for ten weeks. The second case was that of a young girl. The patient consulted her last May for an attack of pneumonia, which was found difficult to treat. A slow recovery was made and the patient was sent to the country. When she returned she had reduced in weight, had night sweats, loss of appetite, and a few tubercle bacilli were found in the sputum. Iodoform injections were immediately started. For the first three weeks there was no very marked improvement. This was attributed to a low blood-pressure. Her sputum, from being profuse, has now diminished to less than a drachm in the day. Cough was very slight. She still suffers from emphysema, but her case is a very hopeful one.

DR. DRURY inquired what was the special treatment that was considered efficient in all the six cases, as the iodoform and tuberculin treatment appeared to have gone hand-in-hand.

DR. MELDON tried the treatment in four cases, and the conclusion arrived at was that in each case the temperature came down, the cough lessened, and the patients appeared much better. The treatment appeared to be efficacious, and in one case he considered the result very good.

DR. NESBITT said he had tried the treatment in one case and found it did well. The case was one of massive consolidation of the left base in a man aged thirty. He was taken into hospital and given thirty-one injections of iodoform, and after three months' treatment his temperature had returned to normal, and had remained so since September last. He increased in weight, lost his cough, and the sputum (which had contained numerous tubercle bacilli) disappeared entirely, although the pulse did not react as he would have wished. He would not go so far as to claim this

as the one and only form of treatment, but there was little doubt that iodoform did benefit his patient. Half-grain doses were given in plain solution of ether, and the patient found no bad symptoms, nor did he object to it. Other methods might, he thought, do as much good, but he felt quite justified in trying the iodoform injections in further cases.

DR. DEMPSEY asked were the cases referred to average cases, or had the treatment been as successful or less successful than other treatments. He feared that the cases brought before them in the paper were high-water mark ones.

DR. MOORHEAD was impressed with the favourable records brought forward by other speakers, but Dr. Nesbitt touched one very important point—*i.e.*, in judging any treatment we should have some idea of the history of the disease. It would, he thought, be admitted that in the natural course all cases on any form of treatment, and even those not being treated, are subject to considerable variation, and it was only by very careful comparison with a very large number of cases one could form an opinion of the value of a particular form of treatment. He could not help feeling surprised that phthisis was in existence at all, so many remedies had been put forward. Dioradin, he said, had found enthusiastic supporters in France, and its use was continued here until a comparison of treated and untreated patients had been made in England which showed that dioradin had no influence one way or the other. He was very much struck with the series of drugs employed in the cases reported, and he was at a loss to know which of them, if any, had a beneficial effect. Iodoform appeared to have a very good effect if any of the three forms of administration suited. He would like to know if a patient who had an opportunity of having first-class sanatorium and climatic treatment consulted Dr. Crofton which form of treatment would he select for him—the sanatorium or the treatment just now advocated.

DR. M. HAYES said, as his name had been mentioned as having x-rayed Dr. Crofton's patients, he would like to make clear his conclusions. The first was a case of enlarged mediastinal glands, and the patient had been previously operated on for tubercular glands in the neck.

Nothing else could be detected but these enlarged mediastinal glands. After a course of treatment Dr. Crofton had her examined again, and there was a distinct diminution in the extent of the glands.

DR. PARSONS said he had not much practical experience of treatment with iodoform. He was aware that it was nearly thirty years since it was first introduced and some seven or eight years since it was recommended by Dewar, and some little time ago a circular had been sent round to sanatoriums asking—"Have you any experience of Dewar's method of treatment?" and without exception all the replies were in the negative. He had a little experience of dioradin, as nearly twelve months ago Dr. Bernheim had sent him a supply, which he gave a fair trial, and the conclusion arrived at was that dioradin had no effect on the patients whatsoever. It had, he said, been claimed that it produced leucocytosis, but even if it did this he would not consider it of much importance. He would like to know how many cases had been treated with iodoform, so as to ascertain the percentage in which improvement was shown. It was often found that cases of enlarged glands subsided without any treatment at all.

DR. WALTER SMITH referred to the fact that half-grain was the dose given, and, therefore, taking the average weight of the body as 150 lbs., this would represent 1 in 2 millions, which he thought would have very little effect.

DR. COLEMAN said he thought the cases narrated could be taken to prove little. The great difficulty was that Dr. Crofton had not mentioned the number of cases in which the treatment was tried; he had not mentioned any bad or fatal results, nor had he said anything about controls. In order to derive any conclusions from the effect of iodoform treatment it would certainly be necessary to have a large number of cases fully set out and the same number of controls, and if the treatment with iodoform then showed marked improvement by comparison something could be said for iodoform.

DR. CROFTON, replying to the remarks, said that every one who had used the treatment was pleased with the results. Iodoform had been used in hundreds of cases without any fatal result. The cases reported were not specially picked ones, but were ones which would have

been considered suitable for sanatorium treatment. With regard to the dioradin treatment, he had seen Dr. Bernheim's cases in Paris and was not impressed with the results; but he considered it of a certain amount of use in cutting short colds. He wanted to emphasise that the combination of iodoform and specific immunisation was the ideal to be aimed at. With regard to the selection of sanatorium treatment under climatic conditions or the home treatment as indicated, he would prefer the latter. He did not think he would use controls even had he an opportunity of doing so, as he considered the cases turned out by sanatoriums were quite sufficient for comparative purposes. He was of opinion that the hope of the future was in the prevention of the disease and not the cure, and to make the resistance up to or above normal would be the best preventive.

PURULENT PAROTITIS OF THE INSANE.

IN three cases admitted to the Asylum of Saint Pothier. MM. R. Horand and P. Puillet noticed the presence of unilateral parotitis, in each case the inflammation became bilateral, with a high temperature: and in each case death resulted from septicæmia. From these facts they draw the following conclusions:—(1) The presence of the parotitis with insanity gave rise to the suspicion of otitis. (2) The serious nature of purulent parotitis in the insane is shown by Morastin and Picqué. (3) The rarity of suppurating parotitis in general paralysis (see Eugène, *Montpellier médical*. 1910). (4) The absence of pain on incision of the abscesses. (5) The parotitis is comparable to that found in hemiplegia. (6) In one case only of the three was there free suppuration. (7) The third case showed symptoms of pneumogastric trouble: paroxysmal dyspnœa, tachycardia, irregular cardiac action, and arrhymical respiration. (8) The formation and liberation of pus in the second case produced a remission of the psychic phenomena.—*Gazette des Hôpitaux*, 85° Année. No. 42.

THE FATAL ILLNESS AND DEATH OF NAPOLEON THE GREAT.^a By JOHN KNOTT, A.M., M.D., Ch.B., & D.P.H. Univ. Dub.; M.R.C.P.I.; M.R.I.A.; &c.

THERE is no disputing the fact of "the somewhat overloaded bookshelves of Napoleonic literature," as Dr. Chaplin's preface naïvely expresses that prominent feature of the present position of the evergreen subject of the inspiration supplied by the personality and the career of the meteoric Corsican. And the author's defence of his own contributory item would be: "that the consideration of the fatal illness of Napoleon from a medical standpoint is necessary on account of the complexity of the subject and the difficulties encountered in arriving at a correct interpretation of the facts." This statement of the writer's viewpoint and motive sounds quite sanely. The subject does not appear to have hitherto been specially and satisfactorily dealt with in the English language; nor, indeed, in any other language, so far as we have been able to ascertain. Dr. Chaplin seems to think that he has accomplished this desirable professional task, once and for all. Here, of course, the critical reviewer is also entitled to have his say; and, if worthy of his office, may supply the complementary matter necessary to square out the unit presentation.

An aristocratic politician and bibliophile has recently (among others) been indicating to the British public that an appreciable proportion of its literary output is of thoroughly useless quality; and, indeed, hardly reaches a sufficient proportion of the reading multitude to have much effect in way of either good or harm. The subject of the hero of *Marengo* and of *Austerlitz*, of the *trans-Simplon causeway*, of the *Cherbourg haven*, and of the *Code Napoléon*, is, however, that on which probably the smallest proportion of authors have succeeded in falling flat; without production and display of interesting, true or false, flattering or malignant, matter and manner, in dealing with the presentation of what now we believe to be the most fascinating of biographical subjects. The devotion—approximate adoration—of Las Cases and Montholon has been, not very remotely, paralleled by the appreciation of the

^a The Illness and Death of Napoleon Bonaparte. (A Medical Criticism.) By Arnold Chaplin, M.D. (Cantab.); Fellow of the Royal College of Physicians. With three Illustrations. London: Hirschfeld Brothers, Limited; Glasgow: Alexander Stenhouse. 1913.

loyal medical attendants of the exiled Emperor: the Irish O'Meara and the Corsican Antommarchi; and the testimony of these latter, who saw the fallen hero in all his nakedness, may well be regarded, we believe, as a competently neutralising set-off to the unspeakable filth so freely vomited over the pages of "the *Napoleonic Legend*" by the disappointed candidates for Imperial favour: journalist Goldsmith and General Sarrazin. The fact that the contributions of the latter "gentlemen" have been so freely drawn upon as inspiring "texts" for anti-Napoleonic essays and sermons, during the greater part of a century, well shows the ineradicable vividness of the impression made on his generation by "the Corsican brigand;" as well as the surface slenderness of the judgement—historic, literary, and psychological—of the average British voter. But the wealth of information on this section of European history and biography, which has been teeming—at a rate of velocity truly torrential—from the British Press during the past few years, conclusively proves that John Bull has at last approximately attained to a *discovery* of Napoleon, although it required nearly a hundred years to do so (somewhat suggestive of contemporary attainment of either Pole of our Earth's axis!).

The author of this booklet appears to be—very much, indeed—obsessed by the idea that the clinical riddle presented by "the complexity of the subject" had missed meeting with its adequate Œdipus till he undertook the discovery of the solution. But, such is the variety of views generated by this subject, as well as by every other complex one with which it has been our lot to become acquainted, that some of us, who examined the evidence even long before the auto-suggestion of publication, never doubted that the clinical history of Napoleon's last illness was one of the clearest that can be gleaned from the annals of human suffering—except where artificially, and all too obviously, clouded by tinted testimony. Dr. Chaplin manifests from the very outset a determination to discredit the value of O'Meara's testimony, and in a way forcibly reminiscent of the long-drawn story of British belief that nothing good could come from Ireland. He more than insinuates, he practically asserts, that O'Meara's account of the case of his illustrious patient was "cooked." The present writer is very willing and very ready to defend the thesis that the

“ *clang-tint* ” of *veracity* rings out from every line of the same—and the strongest corroboration of this view which suggests itself to us at the present moment is afforded by the fact that Napoleon’s physician preferred to earn the savage and vulgar vindictiveness of Sir Hudson Lowe, rather than corroborate the view which was diligently fostered by that brutal political tool and gaol-keeper, and vigorously promulgated in the veracious columns of the Anglo-Saxon Press : that the fallen despot’s case was that of a diplomatic malingerer, depicted in the vain hope of being deported to some milder locality nearer home—whence escape could pretty surely be effected.

Dr. Chaplin’s “ *mare’s nest* ” includes the view that O’Meara’s professional—as well as political—testimony was unreliable, inasmuch as he made a diagnosis of *hepatitis* at the time of the onset of Napoleon’s abdominal symptoms. But Dr. Chaplin’s own special *discovery* consists of a suggestion that the original lesion was a *chronic ulcer* of the stomach. Here we beg to utilise the opportunity of assuring our author that, long before the days of antisepsis—and even of anæsthesia, that is to say, long before the abdominal cavity had become the fearsome hunting-ground of the latter-day laparotomist, the fact was taught in our Dublin Clinics (the MEATH HOSPITAL being the *original source* of all modern *clinical instruction*) that the prodromatory stage of the majority of cases of cancer of the stomach consisted of the development of the usual chronic gastric ulcer. No clinical observer now requires to be told that the very frequent epithelioma of the lip almost *inevitably* begins as either a *fissure* or a *wart*. And nobody was seriously surprised that the laryngeal cancer of the late Emperor of the Germans began as a papilloma (*Anglicè*, “ *wart* ”) of the vocal cord ; although Sir Morell Mackenzie diplomatically, as well as dexterously, snipped off a *marginal*, and therefore *undegenerate* (*i.e.*, non-cancerous), specimen for the microscopic inspection of the illustrious Virchow ; instead of a central epitheliomatous item, which he scrupulously avoided. (Thereby, we may add parenthetically, he succeeded in evading one of the most fatal of operations, and kept his Imperial patient alive long after the death of sufferers from whom a similar growth had been radically and *successfully* removed—a fact, by the way, which seemed to have passed unnoticed, although the result aimed at was undoubtedly attained !)

We have indicated the fact that Dr. Chaplin has emphatically impeached the veracity of Napoleon's loyal Irish medical attendant. He also harps on the string of imputed *error of diagnosis—of hepatitis*. And here the writer feels called upon to point out that Dr. Chaplin rather gives away his case at a later stage of the discussion, for he introduces the statistical evidence, collected by the highest recent authorities, for the purpose of showing the unlikelihood of the development of cancer so far back as O'Meara's time. The case at that period *must* have been one of chronic ulcer. But we would indicate, in passing, that he admits that the climate of St. Helena favoured hepatic congestion and inflammation, to which we will add—as a suggestion of our own—that such conditions are *necessarily* accompanied by obstruction to return of blood from the gastric veins, which tends to lead to *varicosity* of the latter ; which establishes malnutrition ; which is *the most favourable of the predisposing causes of gastric ulcer* (as it is of *hæmorrhoidal* and of *crural*) ; which is, of course, the appropriate soil for the germination of gastric cancer. (Unhappily, the microbic *causa causans*—vegetable or animal—has not yet been revealed to, or by, the microscopic pathologist!) Whether this was the sequence of events in Napoleon's case cannot now, of course, be finally decided. But it certainly fits in with the record of clinical events. And we doubt whether the sequence can be more satisfyingly traced in a large proportion of the corresponding cases of the present generation of microscopy and bacteriological pathology. Anyway, the fact does not seem to be disputed, or disputable, that the ulcer had eaten its way through the coats of the stomach, and into the substance of the liver—not an uncommon history of gastric ulcer, surely—while a zone of gastro-hepatic adhesion prevented dispersion of the gastric contents. Dr. Chaplin can hardly suggest that such conditions were produced without hepatic irritation—with inevitable congestion, and (at least) local hepatitis of chronic duration. O'Meara's diagnosis fits in, we venture to assert with confidence, with Dr. Chaplin's suggestion—*minus* his extremely superfluous contradiction.

We are tempted to wonder what Dr. Chaplin was thinking of when he wrote (p. 6) that : “ *Up to the time of his detention in St. Helena, Napoleon had enjoyed the most uniform robust health.* ” For he spoils that statement on the next page, where

he informs us that : “ Records exist also of occasional attacks of vomiting followed by a state of lethargy and stupor, amounting almost to actual unconsciousness. These attacks occurred generally after prolonged physical exertion and mental strain, and outbursts of temper preceded them on more than one occasion. A particularly bad one is mentioned after the fatigue and disappointment incident on the battle of Aspern.” (The idea of quoting Alison as an expert Napoleonic witness, especially on a medical question, as our author here actually does, must be admitted by the skilled student to have a decidedly comical aspect!) And here Dr. Chaplin proceeds to exhibit his *second-best* discovery in connection with the clinical history of the mysterious “ Man of Destiny.” “ Now these attacks, observed for the most part by untrained witnesses, have given rise to the statement that Napoleon was the subject of epilepsy, and it is to be regretted that some textbooks of medicine when describing that disease boldly assert on such slender and doubtful data that Napoleon was epileptic. It cannot be pressed too strongly that no evidence worthy of the name exists in support of such a contention. Gusts of passion and severe vomiting followed by lethargy are poor facts on which to brand a man with the stigma of epilepsy.” Without wishing to “ brand ” the memory of one whom we regard as the most remarkable man that the world has yet seen, we would suggest that the group of symptoms (one is tempted to say half-unconsciously) enumerated in the last sentence suggests a very good imitation of a syndrome which is very well known to present a great many shadings-off—especially in the initial stage, and in cases of the minor type of attack. We need not dwell on the fact that Napoleon’s epilepsy was believed in by Talleyrand and many other of his actual intimates—also that “ the stigma of epilepsy ” is one from which almost every type of humanity instinctively shrinks (as Dr. Chaplin’s observation contributes to prove). The present writer well remembers that the non-appearance of the term *epilepsy* in the elaborated records of Napoleon’s symptoms, which had been transmitted to posterity by O’Meara and Antommarchi, respectively, impressed him very forcibly on the actual occasion of first perusal. Most assuredly, each of those devoted medical attendants knew of the general belief that the Emperor was the reputed subject

of occasional epileptic attacks—especially nocturnal—more particularly after *mental worry* or *sexual intercourse*. Yet neither even mentions “the stigma of epilepsy”—the very discussion of which, like that of a certain type of personal purity, suffices to leave an indelible impression. And here I must take the opportunity of pointing out that Dr. Chaplin goes out of his way to discredit the testimony of the one medical man who sacrificed his position and prospects in life to the noble ideals of unflinching truth and sympathetic devotion to the welfare of his patient. We must, in our turn, candidly express the opinion that Dr. Chaplin does not seem to have read O’Meara’s book at all, but depended on *nth*-hand extracts from some of the innumerable volumes which are now being poured from the British Press—inclusive of the *Encyclopædia Britannica*, and the *Dictionary of National Biography*. He has consulted the latter—unquestionably ; in the classic phraseology of Tony Lumpkin : “ I can bear witness to that.” The author himself goes so far as to say that “ nothing has been taken from ‘ *The Voice from St. Helena* ’ ” regarding the connection of O’Meara with Napoleon—a statement which asks for no corroboration whatever ! And the reason is little less than luscious in the exquisite *naïvete* of expression : “ For O’Meara’s evidence is not trustworthy in the absence of some form of collateral testimony. Furthermore, he was an enemy of the British Government. . . . ” This expression of opinion is delivered in apparent oblivion of the facts that O’Meara’s record is thoroughly consistent throughout with the elaborate diaries and comments of Las Cases and Montholon—the devoted followers of the fallen Emperor, who elected to share their master’s fate in his lonely exile ; while Dr. Chaplin actually takes as his authority “ that mine of information concerning St. Helena, the ‘ *Lowe Papers* ’ in the British Museum ”—enlightening his readers with the appended comment : “ These volumes contain the daily reports of the physicians responsible for the treatment of the patient, and in many respects they are completely at variance with the published statements.” (Of course they are, thoroughly *cooked* as they must have been !) But not only does Dr. Chaplin forget that O’Meara’s report is fully consistent with that of his French non-medical votaries—although, as he himself points out, there was no love lost between them—but that it

is also thoroughly consistent with *his own* theory of the origin and course of the fatal illness of Napoleon the Great, and is the *only* one of which this can be truthfully affirmed. In these days of plentiful *Reports* of Royal Commissions, and the familiar veracity and appalling ratiocination of Parliamentary and other varieties of public speaking, we most strongly protest against such attempts to insult our intelligence, and neutralise our hardly earned little stock of “gained knowledge,” by such statements and assumptions—especially in presence of the admitted fact which Dr. Chaplin, happily, does not fail to indicate, that: the other medical visitors of the suffering Emperor stand—very obviously, indeed (!)—convicted of gross misrepresentation, and for the all too patent purpose of retaining their Government appointments! O’Meara may have had his full share of the Irishman’s “contentious and partizan spirit;” his record well shows that he also possessed the impulsive sympathy which so well characterises the best class of his fellow-countrymen. As a specimen of the same, and of his powers of clinical word-painting, we would just invite Dr. Chaplin’s special attention to two consecutive entries of O’Meara’s diary, of October, 1817; at a time in which he and his patient were *excessively* worried by the *brutal attentions* of Sir Hudson Lowe:—

“19th.—Communicated this reply of the Governor to Napoleon; after which, and after having assured him that I would not send any bulletins without having shown them to him, he entered into a communication with me touching his malady. He was never free from dull pain, or an uneasy sensation in the right side; his appetite was diminished; his legs still swelled, especially towards night; occasional nausea; great want of sleep, &c. There was some degree of anxiety evident, and a cast of melancholy, probably caused by his complaint, and increased perhaps by the information in the last paper sent him by Sir Hudson Lowe, containing the decision of the allied powers, that his son should not succeed to the duchies of Parma, &c.

“22nd.—Napoleon very unwell last night with an attack partly of a nervous nature.—Asked me if there was a witness present during the conversation which I was obliged to hold twice a week with the governor? I replied in the affirmative. ‘Then,’ said he, ‘Doctor, you will be made to speak as he

likes. I will venture to say, that he has a *procès verbal* made out every time you go there, and such conversations made and signed by his witness, which will be produced against you hereafter. It would not surprise me if he had a conversation ready made before you arrive there. It places you in a very dangerous situation.' "

Now, I hardly think that even Dr. Chaplin will venture to deny the clinical discrimination, and translucent portraiture, displayed in the former of the above paragraphs. Then comes a significant contrast. In the next entry we learn that the illustrious patient had been " *very unwell* "—while the attempt at description is limited to the words " with an attack partly of a nervous nature " : a pictorial presentation of clinical happenings which might have been produced by the late lamented Mrs. Sairey Gamp for the information of the first confidential friend interviewed after that worthy lady's first morning " refreshment " !—Even if Dr. Chaplin had read the *Voice from St. Helena*, which we feel by no means disposed to believe, he might possibly have missed the significance of the *non-existent* testimony there *negatively* displayed ; as it surely would appear to another sympathetic Hibernian Celt, who also happened to be a clinical expert and experienced critic. But the present writer feels as well assured that Napoleon suffered from epilepsy—and in the aggravated form of *status epilepticus*—on the night of October 21, 1817, as he does that he himself slept last night—while he has *seen* neither one nor the other event, except " with the eye of faith." Enough, and more, was implied in the reminiscent note : " an attack partly of a nervous nature "—not the original words of the note of private entry, surely ! The leal and warm-hearted Irish physician would dwell at no greater length on the mental contemplation of the most painful of all clinical pictures, far less would he present the same to the view and comment of *lay profanity*. He *swerves*, with the jerky abruptness of reflex action, from further contemplation ; in a way strictly comparable to the physical movement of the chauffeur who sees a child suddenly project itself before his motor. Most assuredly, if it had been *anything else* we would have now before us a full-length clinical picture of the conditions which made " Napoleon very unwell " on that momentous occasion. (We wonder would Dr. Chaplin venture to supply any alternative suggestion ?)

We have already quoted the somewhat flippantly unbiographical statement with which Dr. Chaplin starts—by asserting the enjoyment of “the most uniform robust health” by Napoleon down to the date of his residence in St. Helena ; and we have pointed out how he spoils the same so soon as to lead the reader to wonder whether he had ever re-read his script, or corrected his proofs. However that may be, if, as we are necessarily bound to believe, he thought at the moment of writing that he was stating a fact, we have here undeniable proof that he did not wait to “make up his brief.” He must even have not had then before him Antommarchi’s highly skilful report of the *post-mortem* examination, which he subsequently quotes at length—and accepts, although he (characteristically) goes out of his way to discredit him at the outset (presumably on the strength of the testimony of the precious “*Lowe Papers*”—the cooked documents, which were specially spiced for the palate of the British tax-payer, who was then so weary and heavy-laden with the burden of the National Debt !). But this quality of comment will hardly carry far in the second decade of our twentieth century, in presence of the torrent of Napoleonic literature in which we are now immersed : having regard to the facts that, since the beginning of the recent (or present ?) South-eastern European war, we have had the conservative *Daily Telegraph* pointing out, among varied (almost diurnal) appreciations, that Napoleon penetrated the psychology and practice of warfare more deeply and successfully than any other conqueror known to the annals of the human race ; and the aristocratic *Morning Post* admitting in perfectly clear language that the battle of Waterloo would have been lost—indeed, was lost—by Wellington, had not Blücher providentially arrived at the crucial hour of the evening ! Napoleon was up betimes on that fatal 18th of June, but he became drowsy in the early afternoon ; and in the evening and night’s retreat he required support on horseback, and marked *swelling of the legs* developed. At the *post-mortem* examination it was found that the heart was loaded with *fatty* deposit, while the ventricles and auricles were apparently healthy, but *pale*. Thus we can here afford to make Dr. Chaplin a present of the fact that Napoleon was the victim of *fatty degeneration of the heart* ; which had set in before either the chronic gastric ulcer which he has been ‘cute

enough to "discover," or the cancer which unquestionably supervened.

Our author would even appear to have forgotten that on examination of the left lung, Antommarchi "found the superior lobe sprinkled with tubercles and some small tuberculous excavations." (An interesting fact—never more so than in this our own generation of *Anti-tuberculosis* crusading !) But he was, of course, chiefly concerned with the overthrow of *hepatitis*. In a culminating stroke at "the false view that Napoleon was suffering from hepatitis," we are treated to an exhibition of the *coup de grace* : "Although then an excuse may be urged on behalf of O'Meara and Stockoe, none can be offered for Antommarchi." (We cannot wait to ask what will Dr. Chaplin's professional opinion of ourselves be when he has learned that we, too, believe that there was hepatitis there—much and long !) We do not propose to discuss Antommarchi's clinical acumen at greater length, but we implicitly accept his account of the *post-mortem* examination of his patient : it *rings true from beginning to end*. The date preceded the onset of microscopic and bacterial pathology, of course ; but he was one of the highly skilled experts in the structure of the human organism, before such knowledge began to be replaced by the latter-day charlatanism of the revival of the methods and attainments of Chinese and prehistoric "surface anatomy." And it is little less than astounding to find that Dr. Chaplin, after discrediting the Corsican medical attendant all the way from the very start, admits (on page 71) acceptance of his report in preference to those of all the others, which "agree in substance." And (fancy it !) "if Antommarchi's appears to differ, it is owing to the fact that it describes accurately and in detail the morbid conditions present."

As Dr. Chaplin has stated, in terms so definite, the (*non-*) fact of the uniformly robust health of Napoleon down to his residence in St. Helena, I here take the opportunity of interpolating an item of information on that interesting subject, associated with the Toulon campaign : "Étant un jour dans une batterie, où un des chargeurs est tué, il prend le refouloir, et charge lui-même 10 à 12 coups. À quelques jours de là, il se trouve couvert d'une gale très-maligne ; on cherche où elle peut avoir été attrapée ; Muiron, son adjutant, découvre

que le cannonier mort en était infecté. L'ardeur de la jeunesse, l'activité du service font que le Commandant d'artillerie se contente d'un léger traitement, le mal disparut ; mais le poison n'était que rentré ; il affecta long-temps sa santé, et faillit lui coûter la vie. De là, la maigreur, l'état chétif et débile, le teint maladif du Général-en-chef de l'Armée d'Italie et de l'Armée d'Égypte. Ce ne fut que beaucoup plus tard, aux Tuileries, après de nombreux vésicatoires sur la poitrine, que Corvisart le rendit tout à fait à la santé ; alors aussi commença cet embonpoint qu'on lui a connu depuis." (So we find that, during the whole period of his ascent to the highest position, Napoleon *never enjoyed a single day's "uniform robust health"*!) Thus Las Cases—who had much first-hand knowledge, and nearly all available second-hand ; but, as an impulsive, and probably credulous, *lay* witness would seem to have mingled (or confused) two—perhaps three—clinical entities. Corvisart's "nombreux vésicatoires" were, we would suggest with some confidence, more probably aimed at the tuberculous upper lobe of the left lung—even of both those organs. The same devoted follower mentions a biographical incident of his hero's life at the age of 10—just after he had become a pupil of the military school at Brienne. For some defect of duty or demeanour, the boy was condemned "à porter l'habit de bure, et à diner à genoux à la porte du refectoire : c'était une espèce de déshonneur. Napoléon avait beaucoup d'amour-propre, une grande fierté intérieure ; le moment de l'exécution fut celui d'un vomissement subit, et d'une violente attaque de nerfs." This is the earliest edition, that we have been able to trace definitely, of "the attack partly of a nervous nature," referred to by O'Meara in the decline of Napoleon's life. And, if Dr. Chaplin suggests that the attack was not epileptiform, we would gladly hear from him under what heading he thinks it can be classed ? Assuredly, not under that of any supplied by the long-drawn list of the official *Nomenclature* of the Royal College of Physicians !

But we must have overtaxed the endurance of our readers, so that it is necessary to pass on. It is peculiarly difficult to tear one's self away from the all too fascinating subject of Napoleon's personality ; and this fact, so universally recognised by the most experienced readers, carries with it corresponding

surprise on finding that any one should venture to teach either the lay or medical public on so important a subject of study and criticism without taking the *time*—it could never, we would suggest, be looked upon as *trouble*—to provide at least a moderate equipment ; and, therewith and thereon, to construct and occupy a well-chosen and well-illuminated viewpoint, in a non-refracting medium. Dr. Chaplin has done neither this, that, nor the other. Was his suggestion of “ *heart-block* ” as a substitute for *epilepsy* meant for an ultra-modernistic joke of scientific structure ? The term is well up-to-date, but hardly applicable—especially at the age of ten. Now that Britain has *commenced* to “ discover ” Napoleon—having laboured for nearly a century under the curious hallucination that she defeated him at Waterloo—she should surely try to provide a really skilled medical expert to produce a translucent and illuminating study of the most remarkable specimen of *homo sapiens* known to the life history of the species.

But the present prospect of the coming of the Messiah of medical history from the east is anything rather than encouraging. Dr. Chaplin’s contributory ray of illumination is by no means suggestive of the appearance of *Vindemiatrix* above the horizon of the annals of the healing art, and of the sciences thereunto contributory and ancillary. For, even as we go to press, we are victimised by another *solar-plexus* concussion : an eminent specialist has undertaken to *PROVE*—to the lay as well as to the medical public (*vide* interview in *Manchester Guardian* of January 8, 1913), that the labelled specimen of intestine in the Museum of the Royal College of Surgeons (London) is really that of Napoleon ; while microscopic examination of certain morbid growths connected with the mucous membrane of the same has *proved*, in turn, that the exiled Emperor really died of “ *St. Helena disease*,” not of cancer—if of both, surely rather of the former than of the latter. And the process of morbid ratiocination by which this ultra-modernistic apostle of scientific light and leading establishes the validity of his (historical and pathological) syllogisms should surely make Aristotle turn in his coffin. For Sir Astley Cooper’s name is attached to the label (affixed by nobody knows who) ; while “ every medical man knows that the official report cannot be true,” for it “ was a political and not a medical document ” (partly right and partly wrong, as

usual). Antommarchi had, of course, "had full opportunity of learning from O'Meara the nature of Napoleon's complaint" (our fellow-countryman here scores high, as the accuracy of his diagnosis floats heavenward without ballasting criticism or submerging detraction). But, on the other hand, we would suggest that it is far less than likely that the devoted fellow-countryman of Napoleon would have handed over the most precious of all pathological specimens—especially in presence of an extreme probability of their finding an ultimate resting-place in a British collection (after his personal experiences of the government of St. Helena, and Lord Bathurst's atrocious treatment of the hero of Marengo and of Austerlitz—the treatment by which he crushed down the vital energy, and finally crushed out the "vital spark," of his prisoner in a way that vividly suggests the gradually contracting metallic cell of "the good old times;" and which surely, by itself, would have proved effective—with or without the *gastric cancer*, or "*St. Helena disease*," or *scorbutus*, or *fatty degeneration of the heart* and other organs; from each and all of which Napoleon undoubtedly suffered). There are surely data enough before the world at present on which to form a skilled opinion regarding the contributory causes of Napoleon's death. The only pity of it is that our headlong specialists are so spasmodically disposed to illustrate the concentrated wisdom of the aphoristic statement: "There is nothing like leather" (!). The wonder—at least, one of the wonders—of the present pathological aspect of the Napoleonic record, when the crest of the wave of the Anti-Tuberculosis Crusade would appear to have attained its maximal level, is that no "consumption-cure" specialist has come forward with a suggested explanation of the state of the lungs, and of the fact that a person endowed with the apparently superhuman energy of body and mind which characterised Napoleon had actually been a quondam victim of early tuberculosis—and had undergone some previously unexplained form of apparently spontaneous "cure"—so long before the discovery of the tubercle bacillus, or the preparation of tuberculin. Another of the aspects of the recent record of the clinical history of the "last phase" of the ultra-dramatic career of the wonderful Corsican is the neglect of those *scorbutic* symptoms which were so prominently in evidence in the word-paintings of his medical attendants. And in the present hyper-

acute stage of anti-tuberculous energy, it should surely interest all inquiring readers to learn that each of the lungs was "légèrement comprimé" by a slight pleural effusion; that the left pleural cavity contained "environ un verre d'eau de couleur citrine," while the right "renfermait environ deux verres d'eau de couleur citrine;" that the left lung "présentait nombreuses brides" of adhesion of its pleural investment to that of the chest wall and of the pericardium; and that, on dissection of this lung: "je trouvai le lobe supérieur parsemé de tubercules et quelques petites excavations tuberculeuses."

The publication of some trifling comment of mine on this subject, some two-and-a-half years ago, had the felicitous result of eliciting from the late Mr. G. de Gorrequer Griffith, M.R.C.S., the display of a previously unknown connecting link which brings us into (at least, approximately) second-hand contact with the fallen hero of Austerlitz, the prey of Wellington (who suggested the St. Helena deportation), and the ultimate victim of Lord Bathurst and his tool, Sir Hudson Lowe—in the words of the following communication to the columns of *The Medical Press and Circular* :—

"In the very interesting letter from your correspondent, John Knott, of Dublin, my eyes rested on the following :—

" 'The extraordinary fascination which Napoleon's personality exercised, even in his deepest adversity.'

"To this I can also testify, and likewise 'that familiarity with him did not breed contempt,' inasmuch as my uncle, Col. Gideon de Gorrequer, was the British commissariat officer in St. Helena, and in charge of that department all the time Napoleon was alive, and was with him at his death, and spoke of the respectful deference which he and others showed to the Emperor.

"Many a time Col. de Gorrequer stood between the Governor's hostility to 'General Buonapart,' as he termed the ex-Emperor.

"After the *post-mortem* upon the body my uncle obtained pieces of the sheet stained with the blood of the dead man, and a lock of his hair, and some of the needles with which the body was sewn up; and till the Colonel's death he preserved them reverently and carefully, when they were handed on to us, the members of the Colonel's family. Col. de Gorrequer showed the greatest consideration in every way in his power in

order to lighten the burden of the Emperor's captivity, and also because he could not but feel deeply for the deposed monarch.

"This is well shown in the 'De Gorrequer Papers'—a large box of MSS. written by Col. de Gorrequer concerning the captive, his treatment, and daily life.

"I may add that the disease of the stomach, supposed to be cancer, was at the time supposed to be due to the enormous quantity of snuff the Emperor used to take."

The mysterious—"hypnotic," as some will prefer to phrase it—influence of Napoleon's presence, to which his unprecedented record was, of course, mainly due, stamped itself on the whole of his human environment. Philosophic observers of human nature have often recorded how likely a son is to display the moral (or immoral) features of the maternal personality. And Barry O'Meara's impression of Madame Mère, on meeting her in Rome (after his St. Helena experience), some two years before the death of her Imperial son, was that she displayed, even in that period of her old age, a presence and personality "worthy of a Queen, or of the *mother of Napoleon*." This comment of a highly perceptive Hibernian Celt should, I confidently suggest, more than efficiently wipe out the indescribable and unquotable filth that was plastered so copiously over the memory of that extraordinary mother and son by the redoubtable Lewis Goldsmith; whose testimony formed for nearly a century the great literary quarry from which other British journalists and historians drew their respective sources of inspiration. (And I must here point out, before losing sight of O'Meara, that he emphatically affirms that the report of Napoleon's *snuff-taking*—like that of Mark Twain's death—was "greatly exaggerated.")

The present writer, like very many others, formed his early impression of Napoleon, as a *mauvais sujet* of military and political romance; who, as a sort of wicked *Jack the Giant-killer*, for some fifteen or twenty years amused his available spare time by chasing Kings and Emperors up and down the map of Europe. His first revelation—not a disillusion—was in a visit to Milan (and a glance at the Simplon causeway, and the triumphal arch which celebrates the completion of the same) and its vast Napoleonic *arena* (of Roman type), and the other evidences of the couple of years' very occasional presence of "*le petit caporal*," which were indelibly

stamped (it may be said, without violent exaggeration) on every stick and stone of that city; and at a time when he had other duties to fulfil, enough—and more than enough—to exhaust the energies of a score of historic heroes. And my crowning illumination (of approximately second-hand transmission of reflected light) was supplied during professional attendance at the time of the fatal illness of the son of a naval officer, who bore the remarkable combination of names: J. Napoleon * * *. (The cognomen is suppressed, as it was then rather over-familiar in the noisy discussions of Irish public life.) I naturally sought for the inspiration of the startling nominal complex. The facts were, I thought, and still think, as curiously romantic as any recorded of Napoleon—by either friends or enemies. The contemporary naval officer, very naturally, had been imbued throughout—as a true blue-jacket of those days of British storm and stress—with a hatred of the “Corsican demon” which amounted to little less than frenzy. If he could only ever attain to the unspeakable privilege of picking off his flesh (in quite *small* pieces) with red-hot pincers——!!! Fancy the ecstasy of that patriotic sailor when the fallen Emperor was consigned to his special care and supervision for the deportation to St. Helena! (How he must have hugged himself at the announcement, when—as subsequent events at St. Helena too clearly proved—he might have treated the enemy of his country pretty much after the suggestions of his own heart.)

But—let the reader note the result—he fell so madly in love with his prisoner that, for the remainder of his life, the name of Napoleon was never left unspoken during a waking half-hour, and was very often muttered during sleep. Its enunciation became (after the interval of interesting novelty) the plague of his family when at home, and pestered his brother officers and subordinate “blues” when on board his ship; and when a faithful and obedient wife presented him with a son, he did what in him lay to perpetuate the memory of the most exalting experience of his life, by giving the sacred name to his infant boy! If any evidence of the mysterious and overwhelming power of Napoleon’s presence had previously been wanting, it was supplied by this last link. It convinced the present writer, beyond the power or desire of recantation; and, I venture to think, it will convince most, if not all, inquiring readers.

BRONCHO-PNEUMONIA AND ITS COMPLICATIONS IN INFANCY.

By PROFESSOR L. CONCETTI, Professor of Pediatrics in the Royal University of Rome. Translated from the "*Rivista Ospedaliera*," Vol. II., No. 8, by GEORGE MAHOOD FOY, M.D., F.R.C.S.I.

(*Concluded from page 66.*)

IN the cases which we have reported the mortality was not excessive (8 to 21, rising exceptionally to 38.1 per cent.), if we make allowance (1) for the tender age of the patients (about one-half of whom were under the age of twelve months, and the remainder from one to three years old). (2) The advanced and grave state in which the majority of them were admitted (one alone came at the beginning of the disease, but after a serious attack of entero-colitis; of four admissions, they were ill three to four days; of ten admissions, some of the patients were suffering from eleven to forty-five days). (3) The serious complications to which they succumbed. In short, among our eight deaths, one patient had diffuse tuberculosis with tubercular meningitis; one, septic poisoning with erysipelas and acute serous meningitis; one, acute parenchymatous nephritis; and five suffered from empyema, associated with nephritis in one case, in another associated with bilateral otitis, in another associated with unilateral otitis and septicæmic staphylococci after severe entero-colitis; in two cases the complication was purulent meningitis, one of which cases, however, was associated with purulent pericarditis, and the other with hæmorrhagic encephalitis. In six out of eight cases the broncho-pneumonia was bilateral. We can say that not one death resulted from broncho-pneumonia alone. The prognosis of broncho-pneumonia, as we have said, is very grave, especially for those in the atmosphere of an hospital, and for weak infants, rachitic and atrophic. It is still more grave, in increasing order, when it follows diphtheria, measles, influenza, and whooping-cough. But of all forms the most dangerous are those which assume the broncho-capillary type, all acute forms with disseminated foci temporary or permanent, all pseudo-lobar forms; from the point of view of complications, we think meningitis, pericarditis, purulent pleurisy and nephritis are the most serious. Finally, the element of the greatest importance in prognosis is the attention bestowed on the patient.

The treatment of broncho-pneumonia varies with the type of the disease. In the mild forms (with a temperature not too high, a pseudo-lobar form with a simple permanent focus, not very dull on percussion, pulse not too frequent, not exceeding 129 to 140, respirations not more than 40, and regular, free of cyanosis, nervous and urinary systems normal), sufficient rest in bed, a large well-aired room, and some sinapisms; if the cough is troublesome, as is usual in the first days of the sickness, we vaporise chamomile water in the vicinity of the infant, maintaining a warm, moist air in the room, and give a mixture of 1 to 2 gr. of the benzoate of sodium with 10 to 12 drops of paragoric elixir or the syrup of codein, a teaspoonful every one, two, or three hours; else a half to a teaspoonful of bromo-codein of the Meridionale Galenical Society; or, every two to three hours, a teacupful of warm milk with two to three tablespoonfuls of the water of Ems. If the fever tends to rise at any time during the day above 102° to 103° , if we are able to say when the rise occurs, we give every two hours previously 10 cgms. each of aspirin and aristochin, or we order a tepid bath, 95° to 97° , for eight or ten minutes, with broken ice to the head. When the cough becomes less troublesome, and the sputum is thick, discontinue the paragoric elixir mixture of the syrup of codein, and substitute an infusion of polygala senega—3 to 4 per cent., with 1 to 2 gr. per cent. of the solution of anisated ammonia,* and further surround the patient with the vapour of a hot infusion of eucalyptus, with tar, or with turpentine. When the resolution is slow in coming about, or has a tendency to chronicity, apply a warm moist pack to the thorax, or paint it with tincture of iodine, and to the expectorant mixture add an equal quantity of the balsamic glycerate mixture of the Meridionale Galenical Society (this mixture contains creosote, guaiacol, iodoform, and terebene). The prolongation of the illness calls for change to the seaside, or, in the very hot weather, to the country. But in the worst forms, with a high temperature, a quick pulse and shallow, frequent respirations, sighing and irregular breathing, multiple temporary foci, cyanosis, nervous syndromes, wasting and sleeplessness, and so forth, call for the utmost care. In such serious cases the possibility of re-

* The solution of ammonia with aniseed, of the "Farmacopea Ufficiale del Regno d'Italia," consists of alcohol 24 parts, essential oil of aniseed 1 part, solution of ammonia (sp. gr. 0.960), 5 parts.

covery is not wholly due to the energy of the treatment, but to the mode of its application, in recognising at each moment the imminence of the danger, and protecting the patient from it; a duty which demands the continuous presence of the physician, or a trustworthy nurse who has received special training in the disease, and who acts under the immediate direction of a pædiatric practitioner, who visits the patient many times a day. In such a case the patient should be removed to hospital, for the reason that the family surroundings make it impossible for the physician to arrange to seize every opportunity, and to be present at every dangerous crisis. As for medication, we prescribe, on occasion, increasing by small quantities, alcohol (8 to 10 drops of Cognac brandy four or five times in the twenty-four hours). When the pulsations exceed 140 to 150 we give digitalis, in the form of an infusion (0.25 per cent to 0.40 per cent. of leaves) alkalised with 0.25 to 0.50 of aristochin^a and aspirin; or at the beginning $\frac{1}{3}$, $\frac{1}{2}$, $\frac{2}{3}$ of a syringe-ful of digitalin, and of this give 5 to 6 drops two or three times a day. The digitalis should be discontinued temporarily after the third or fourth day, and as long as the improvement in the character of the pulse continues, so that its cumulative action may be avoided. We give hypodermic injections of half a syringe-ful of camphorated oil,^b 10 per cent. in the morning, and repeat the injection every fifth or sixth hour. In cases of a still more dangerous type with myocardiac deficiency, ventricular dilatation, cyanosis, oliguria, threatened bulbar paralysis, we rely on hypodermic injections of $\frac{1}{3}$ to $\frac{1}{2}$ of the contents of the syringe of a solution of the neutral sulphate of strychnine and sparteine (0.05 and 0.50 in 50 gr. distilled water) daily, for one to three days; and when the patient is extremely prostrate, the heart very feeble and irregular in action, some citrate of caffein and benzoate of sodium (1 gr. of the first with 2 of the second in 10 of water), and repeat the dose if necessary. For the dilatation and the threatened cardiac paralysis, with a continuance of the irregular cardiac action and tremors, apply a bladder of ice, and also, in case of the suppression of the pulse with excessive dilatation and sus-

^a Aristochin—The neutral carbonic ester of quinine. It is a tasteless white powder soluble in water, alcohol and chloroform. It contains 96.1 per cent. of the alkaloid.

^b The strength of the camphorated oil of the Italian Pharmacœpia is 1 in 10.

pension of the action of the right ventricle, aspirate the ventricle and draw off some cubic cms. of blood (De Cristina: *La Pediatria*, 1910). Recently it had been proposed in this most grave form of broncho-pneumonia that the hypodermic administration, both subcutaneous and endo-venous, of the named drugs should be completed by electrolysis (5 to 10 cms. per diem); in our experience the practice has given good results. Above all, keep the patient in a large, well-ventilated room, and in the cyanotic forms of the disease give an abundance of oxygen by inhalation, repeated every hour for ten to fifteen minutes at a time. Of great value are large and repeated sinapisms and the free application of dry-cups to the thorax and back. Hydrotherapy is, however, most valuable in the treatment of all forms of broncho-pneumonia, and in every variety of case. It is the only curative method that, properly used, is capable of affecting favourably the complex symptoms and protean forms of this disease, which manifest themselves by cough, hyperæmia, hypostasis of the lung, cyanosis, and also by expectoration and resolution; by its action as an antipyretic, a cardiac tonic, and as a diuretic and diaphoretic, and, finally, as a calmative to hypertension of the nerves, restlessness, sleeplessness, and as a bulbar tonic. We may add to the indications for its use that it is still more valuable in the treatment of typhoid fever.

In cases not quite so serious we limit the number of baths to two or three a day, at a temperature of 93° to 96.8°, of five to eight or ten minutes at a time, when the fever is about its highest. When the hyperpyrexia continues after the patient has been placed in the tepid bath, cold water of a temperature varying from 82° to 90° may be gradually added to the bath; but if there are cyanosis and frequent evidence of pulmonary hyperæmia, with dyspnœa, and the heart is weak, do not give the child a bath, but syringe him quickly over the neck, back, and head, with water at a temperature of 50° to 60°, followed by a good rubbing with rough warm cloths so as to stimulate the skin, or with alcohol and coarse towelling to cause a reaction, and give a tablespoonful of warm milk or tea with some drops of Cognac brandy.

Use the baths alternately every half hour or hour in the conditions specified above—that is, in acute hyperpyrexia, hyperæmia, pneumonia with disseminated foci, supplementing the bath with a cold wet pack permanently on the trunk. In some cases the wet pack obviates the necessity for fre-

quent bathing, especially when the child or the family are opposed to it; when the child's heart is very weak, or the child himself so weak that the act of bathing him might produce syncope, &c., &c. Many families object to the medicinal use of the bath who do not object to the wet pack. In such cases we at first make the temperature of the bath agreeable, adding some aromatic vinegar or camphorated spirit. Many times we have found good effects from this, and the opposition of the family to the baths ceased. To apply a pack, fold a bath towel in four folds, and dry it well, apply it to the child's back, and then bring it forward under the arm-pits, so that it overlaps in front like a vest, and extends from the collar bones to the groins. It should now be covered with a wrap of flannel, oil-skin, or some other impermeable cover, then put round all a light woollen coat or shawl, renewing the pack every half-hour. If the extremities become cold, wrap them in warm woollens, and apply a hot bottle to the feet. If, however, we find a general pyrexia the bath must be resorted to. During the hydro-pathic treatment a cold cap, or some broken ice, or a bladder of bruised ice, should be constantly on the head. We may say that the cold bath is not tolerated by the infant owing to its tender age and its debility; it is the exception for infants formerly big and strong to use the bath habitually. The deficiency of the reaction consecutive to its use makes the cold bath dangerous, for this reason, as Winternitz said, an incomplete reaction is equivalent to a cold and a collapse, causing a greater or less shock, shiverings, and continued tremors, small pulse, irregular distribution of temperature, pallor, cyanosis, insomnia, and so on. And when, from the condition of the infant, it becomes necessary to give a cold bath, the physician may at the end be called on to assist at a succession of convulsions.

It is quite true that infants, as a rule, are refractory to every kind of a bath, but their dislike to a tepid or warm bath is considerably less than to a cold one, and can be overcome. The tepid bath is attended with less risk, and it can be gradually cooled down by successive additions of cold water until it reaches the desired temperature. In some cases we have succeeded in obtaining consent to the use of the bath by stretching a towel over the bath-tub, taking care to make the towel taut, and then placing the infant comfortably on it. We gradually lower the cloth into the warm bath, and the

child is in his bath before he thinks. We commence with a warm bath, for the chill of cold water calls forth all the child's power of resistance.

There may be very grave cases with cyanosis, unequal distribution of heat (104.2° to 106.5° to 108° in the arm-pit and bowel, cold, and cyanotic extremities), with a small vermicular pulse, with subnormal temperature (as occurs in the advanced stages of this form of multiple foci, with recurrent attacks of hyperæmia and capillary bronchitis, in rachitic children with asthenia of the muscles of respiration); in such a case the warm bath, 102° to 104° , with aromatic vinegar, or camphorated oil, or mustard, is a valuable stimulant; maintaining all the time a bladder of ice to the head, and friction to the extremities. Carefully observe the heart and pulse during the bath, so that on the least sign of collapse the child may be immediately lifted out of the water.

Heubner, in such cases of great gravity, to avoid the risk of bathing the child, recommends that the child be wrapped in a large sinapism, made by adding 200 to 300 gr. of fresh flour of mustard to 3 to 4 litres of water at 113° , spread in a large towel, and after he has been well wrapped up cover him from the chin to the heels in a woollen coat, closing it carefully at the neck, so that the fumes of the mustard may not affect the eyes. Allow the sinapism to remain on, keeping ice to the head, until the skin is made red. Then immediately immerse the child in a bath at 104° to remove every trace of the mustard, and quickly wrap him up in warm woollen clothes, and give him a tablespoonful of warm milk or tea with a few drops of Cognac brandy.

If paralysis threatens, immerse the child in cold water and quickly pour cold water down the back and neck. In a short time the child becomes quiet, the respirations become fuller, sleep follows, diaphoresis results, and the child awakens revived. All these symptoms point to the value of large sinapisms and hydrotherapy in the treatment of broncho-pneumonia of the suffocative form and for capillary bronchitis.

The nutrition in the course of broncho-pneumonia should be light, consisting of milk, bread, yolk of egg, and in serious cases small quantities of alcohol in tea or coffee. At the beginning of an attack it is not a bad rule to commence with a mild purgative to eliminate the possibility of any gastrointestinal complications, and to bear in mind that during every serious sickness the activity of the gastro-intestinal

function is arrested, and the nutrition we give is liable to undergo pathological fermentation, which had better be avoided. This may occur during the illness, as the child has not the sense to expel the sputum, and many products of the diseased respiratory tubes are swallowed, and mucus and muco-pus are frequently found in the fæces.

For the nervous syndrome the frequent use of baths and of ice to the head is very valuable. But the most prompt and trustworthy remedy is lumbar puncture. In the majority of cases the nervous symptoms became less severe, and even ceased, and did not recur; the action was uncertain after the first puncture, but very seldom after the second (unless in cases of purulent meningitis, in which it is always indicated for diagnostic purposes, and also as a guide to treatment). We find, as a rule, that the nervous symptoms are due to irritation of the *pia mater* by a toxin, with hyperidrosis (normal but excessive fluid), or with true acute serous meningitis (albuminous, lymphotoxic, in sediment, sometimes giving a uniform and at others a reticulated coagulum). We have examples of the first type in Cases X. and XIII., and of the second in Cases IX. and XVI. The symptoms depending on these causes do not justify an unfavourable diagnosis. We except Case XVI. from this generalisation, for in it death was due to a different cause; all the other cases recovered, their improvement following quickly on the puncture of the cord. Among the other advantages of the lumbar puncture is the lessened liability to secondary hydrocephalus, as we learn from the history of such cases prior to the introduction of the operation.

If the nervous syndrome is accompanied by otitis, besides the lumbar puncture, we now must treat the inflammation of the ear, irrigating it with warm fluids, and if necessary performing myringotomy. For purulent meningitis we strongly urge repeated lumbar puncture, warm baths (104.2°), ice to the head, and small doses of calomel (1 mg. two to three times a day). From intra-rachidian injection of anti-meningeal serum we have little hope. What success we have had in cerebro-spinal meningitis was from the meningococcus of Weichselbaum, for the reason that, as a rule, this complication is due to the pneumococcus of Fränkel; in all cases we used it tentatively, injecting 10 to 20 cms. daily through the site of the lumbar puncture; it may be necessary, if possible, to puncture the ventricle. Nephritis,

as a complication, calls for a milk diet without chlorides; we make an exception in favour of fractional doses of chloride of calcium, 1 to 2 gr. daily; warm baths, not exceeding a temperature of 100° to 102° , followed by inunction of olive oil and a wrap of a woollen material enveloping all the body to promote free diaphoresis; if the nephritis be hæmorrhagic, with scanty urine, we apply dry-cups to the loins, and also let blood at the foot. Should signs of uræmia appear, we add from 2 to 4 gr. of adrenalin daily. Knott does not postpone lumbar puncture for a day, and his reports of it are wonderfully good. In cases of cystitis of a purulent character we prescribe helmitol, 1 to 1.5 daily. Dry pleurisy we treat either by warm, moist packs or by painting with iodine. When fluid is present, thin, serous, slightly corpuscular, we aspirate, and we seldom find it to fail in causing the permanent disappearance of the effusion. When the pleurisy is purulent, the one indication is to remove the fluid, and the question naturally arises, is the treatment in cases of infancy different from that of adult life? In infancy it is less difficult to attain a cure by aspiration, or repeated aspiration, without recourse to pleurotomy. If the character of the fluid is sero-purulent, not too thick, and of recent formation, it is not unusual to effect a cure with one or two aspirations. Still, if the fluid is thick and scanty, you yet may effect a cure by repeated aspirations. This year we have so emptied the pleura in two cases, not recorded in this series, because the origin of their pleurisy was not due to broncho-pneumonia, and both recovered without pleurotomy. But if, after a tentative trial, the pus is reproduced indefinitely, and if there is a thick fold and mass of fibrino-purulent matter in the fluid, it is not prudent to defer the radical operation, lest you establish cachexia, and lest the lung should lose its elasticity. In the presence of large collections, one or two aspirations prior to operation have the great advantage of lessening the risk of pleurotomy. In cases of large collections in the left side, with marked displacement of the heart to the right, a rapid withdrawal of the fluid may cause shock and arrest the heart by syncope. After aspiration the fluid, if reproduced, is always less in quantity than before, and there is a tendency in the cavity to contract, and the heart becomes habituated to return to its normal position. For which reasons aspiration should precede pleurotomy. We know that it may obviate the neces-

sity for the radical operation, and it diminishes the risks of the operation. Pleurotomy should be supplemented by resection of a rib, so that there might be a free exit for the fluid and for the function of drainage. This would also admit of the flushing out of the cavity, the cleansing of the interpleural space in infants being attended with great risk. The dangers which attend on the operation in great collections of purulent pleuritic fluid are well known and on record, especially in the cases of infants, most unfortunately, in which we have removed the fluid both partially and completely, and also by puncture. It is a state bordering on death, imminent, or in a few hours; its symptoms, syncopal, asphyxial, cyanosis, intense pallor, bloody sputum from the mouth, imperceptible pulse, anginosa, paralysis or convulsions, and collapse. Nella, *Pathologia Infantile*, August, 1907, gives a report of 11 cases, of which 7 occurred in infants, and is quoted by Gumprecht in his *Manual of Operative Surgery*. Paris, 1909, in which he treats of lymphatic infants, torpid, with hypertrophied thymus, adenoids (*status lymphaticus* or *thymo-lymphaticus*), exudative diathesis, of whom there is little hope, or in a condition of auto-infection from an arrest of the function of the alimentary system; or from a reflex inhibition of the vagus nerve. In such cases it is impossible to successfully operate. In our practice we had two cases, one of simple exploratory puncture, the other an aspiration of a serous pleurisy. Those cases cause us to advocate the safer operation, one outside the organs of respiration. There is the classic case of Professor Langerhans. in which the patient died during the injection of anti-diphtheritic serum. And such cases are not infrequent in the literature of pleurotomy. During convalescence the patient should dwell on the sea coast, except in the very hot months, when a country residence at a moderate altitude is to be preferred. As tonic remedies the convalescent should take cod-liver oil, syrup of the iodide of iron of Ruspini, di-sodium methylarsenite of Menarini. We should avoid all contact with measles, whooping-cough, and especially tuberculosis. Children cured in hospital should be removed to the country as quickly as possible, on the beginning of convalescence, from all possibility of infection. The diet should be not only nutritious, but easily digested, and the digestive powers may be aided by the use of digestive ferments after each meal.

SANITARY AND METEOROLOGICAL NOTES.

VITAL STATISTICS

For four weeks ending Saturday, December 28, 1912.

IRELAND.

THE average annual death-rate represented by the deaths—exclusive of deaths of persons admitted into public institutions from without the respective districts—registered in the week ended December 28, 1912, in the Dublin Registration Area and the twenty-one principal provincial Urban Districts of Ireland was 15.4 per 1,000 of their aggregate population, which for the purposes of these returns is estimated at 1,154,150. The deaths registered in each of the four weeks of the period ending on Saturday, December 28, and during the whole of that period in the several districts, alphabetically arranged, correspond to the following annual rates per 1,000. In some cases, owing to the deaths not having been registered within the week in which they occurred, the rates do not fairly represent the weekly mortality:—

TOWNS, &c.	Week ending				Aver- age Rate for 4 weeks	TOWNS, &c.	Week ending				Aver- age Rate for 4 weeks
	Dec 7	Dec. 14	Dec. 21	Dec. 28			Dec. 7	Dec 14	Dec. 21	Dec. 28	
22 Town Districts	22.0	18.4	20.6	15.4	19.1	Lisburn	21.0	4.2	33.7	25.3	21.0
Armagh	28.4	14.2	—	—	10.7	Londonderry	17.9	20.4	17.9	8.9	16.3
Ballymena	18.3	18.3	18.3	9.2	16.0	Lurgan	20.8	12.5	29.1	33.2	23.9
Belfast	23.5	20.0	23.5	19.3	21.6	Newry	—	13.1	17.4	13.1	10.9
Clonmel	15.3	5.1	15.3	—	8.9	Newtown- ards	21.8	32.6	32.6	21.8	27.2
Cork	21.8	17.0	17.0	16.3	18.0	Portadown	13.3	4.4	—	8.9	6.7
Drogheda	12.5	20.9	4.2	4.2	10.5	Queenstown	19.1	12.7	6.4	—	9.6
Dublin (Reg. Area)	21.7	17.2	20.8	14.2	18.5	Sligo	9.3	18.7	9.3	4.7	10.5
Dundalk	43.7	35.7	—	19.9	24.8	Tralee	30.4	5.1	40.5	15.2	22.8
Galway	35.4	11.8	23.6	7.9	19.7	Waterford	13.3	20.9	20.9	7.6	15.7
Kilkenny	—	29.8	9.9	24.8	16.1	Wexford	18.1	36.2	18.1	27.1	24.9
Limerick	31.1	20.3	19.0	5.4	19.0						

The deaths (excluding those of persons admitted into public institutions from without the respective districts) from certain epidemic diseases registered in the 22 districts during the week ended Saturday, December 28, 1912, were equal to an annual rate of 1.9 per 1,000—the rates varying from 0.0 in fifteen of the districts to 10.1 in Tralee, the 3 deaths from all causes for that district including 1 from measles and 1 of a child under 2 years from diarrhoea. Among the 145 deaths from all causes registered in Belfast are 23 from measles, one from whooping-cough, and 5 from diarrhoeal diseases. Included in the 24 deaths from all causes registered in Cork is one from diphtheria. One death from measles is included in the 4 deaths recorded for Limerick. Two of the 8 deaths registered in Lurgan are from scarlet fever, and of the 6 deaths registered in Lisburn one is from whooping-cough.

DUBLIN REGISTRATION AREA.

The Dublin Registration Area consists of the City of Dublin as extended by the Dublin Corporation Act, 1900, together with the Urban Districts of Rathmines, Pembroke, Blackrock and Kingstown. The population of this area is 400,865, that of the City being 306,573, Rathmines 38,495, Pembroke 29,731, Blackrock 9,125, and Kingstown 16,941.

In the Dublin Registration Area the births registered during the week ended December 28 amounted to 122—60 boys and 62 girls—and the deaths to 116—56 males and 60 females.

DEATHS.

The registered deaths, omitting the deaths (numbering 7) of persons admitted into public institutions from localities outside the Area, represent an annual rate of mortality of 14.2 per 1,000 of the population. During the fifty-two weeks ending with Saturday, December 28, the death-rate averaged 20.5, and was 1.6 below the mean rate for the corresponding portions of the 10 years 1902–1911.

The total deaths registered, numbering 116, represent an annual rate of 15.1 per 1,000. The annual rate for the past fifty-two weeks was 21.8 per 1,000, and the average annual rate for the corresponding period of the past ten years was 23.1 per 1,000 of the mean population for all deaths registered.

The total deaths from all causes included 2 from whooping-cough, 3 from diphtheria, and one from influenza.

In each of the 3 preceding weeks, deaths from whooping cough were 1, 1, and 1 ; deaths from diphtheria were 2, 0, and 1 ; and deaths from influenza were 1, 2, and 2.

There were 21 deaths from tuberculosis. This number includes 15 deaths from pulmonary tuberculosis, 2 from tuberculous meningitis, 2 from abdominal tuberculosis, one from tuberculosis of a joint, and one death from disseminated tuberculosis. In each of the 3 preceding weeks deaths from tuberculosis in general numbered 25, 27, and 39.

Of 14 deaths from pneumonia, broncho-pneumonia caused 10 deaths, lobar pneumonia one death, and *pneumonia* (type not distinguished) caused 3 deaths.

Organic diseases of the heart caused the deaths of 10 persons, and 20 deaths from bronchitis were recorded.

Four deaths were caused by cancer.

Congenital debility caused the death of 4 infants, and there was a death of one infant from *convulsions*.

Of 4 deaths by accident, 2 were caused by burns and one by being crushed by a cart.

In 3 instances the cause of death was "uncertified," there having been no medical attendant during the last illness. These cases were all deaths of infants under one year of age.

Twenty-six of the persons whose deaths were registered during the week ended December 28 were under 5 years of age (14 being infants under one year, of whom 2 were under one month old), and 30 were aged 65 years and upwards, including 24 persons aged 70 and upwards. Among the latter were 9 aged 75 years and upwards.

The Registrar-General points out that the names of the cause of death printed above in italics should be avoided whenever possible in Medical Certificates of the Cause of Death.

STATE OF INFECTIOUS DISEASE IN THE DUBLIN REGISTRATION AREA AND IN BELFAST.

The usual returns of the number of cases of infectious diseases notified under the "Infectious Diseases (Notification) Act, 1889," and the "Tuberculosis Prevention (Ireland) Act, 1908," as set forth in the following table, have been furnished by Sir Charles A. Cameron, C.B., M.D., Medical Superintendent Officer of Health for the City of Dublin ; by Mr. Fawcett, Executive Sanitary Officer for Rathmines and Rathgar Urban

District ; by Mr. Manly, Executive Sanitary Officer for Pembroke Urban District ; by Mr. Heron, Executive Sanitary Officer for Blackrock Urban District ; by the Executive Sanitary Officer for Kingstown Urban District ; and by Dr. Bailie, Medical Superintendent Officer of Health for the City of Belfast.

TABLE SHOWING THE NUMBER OF CASES OF INFECTIOUS DISEASES notified in the Dublin Registration Area (viz.—the City of Dublin and the Urban Districts of Rathmines and Rathgar, Pembroke, Blackrock, and Kingstown), and in the City of Belfast, during the week ended December 28, 1912, and during each of the preceding three weeks. An asterisk (*) denotes that the disease in question is not notifiable in the District.

CITIES AND URBAN DISTRICTS	Week ending	Measles	Rubella, or Epidemic Rose Rash	Scarlet Fever	Typhus	Relapsing Fever	Diphtheria	Membranous Croup	Pyrexia (origin uncertain) <i>a</i>	Bubonic or Typhoid Fever	Erysipelas	Puerperal Fever	Whooping-cough	Cerebro-spinal Fever	Tuberculous Phthisis (<i>Phthisis</i>)	Acute Poliomyelitis	Total
City of Dublin	Dec. 7	*	*	17	-	-	4	-	-	3	3	-	*	-	2	-	30
	Dec. 14	*	*	9	-	-	5	-	-	7	7	-	*	-	5	-	33
	Dec. 21	*	*	7	-	-	1	-	-	4	2	-	*	-	6	-	29
	Dec. 28	*	*	7	-	-	7	-	1	2	2	1	*	-	2	-	22
Rathmines and Rathgar Urban District	Dec. 7	*	*	4	-	-	2	-	-	-	1	-	*	*	*	*	7
	Dec. 14	*	*	5	-	-	-	-	-	1	-	-	*	*	*	*	6
	Dec. 21	*	*	-	-	-	-	-	-	-	-	-	*	*	*	*	-
	Dec. 28	*	*	3	-	-	-	-	-	-	-	-	*	*	*	*	3
Pembroke Urban District	Dec. 7	1	-	-	-	-	-	-	-	-	-	-	8	-	1	*	10
	Dec. 14	-	-	-	-	-	1	-	-	-	-	-	1	-	-	*	8
	Dec. 21	-	-	-	-	-	-	-	-	-	-	-	-	*	*	*	-
	Dec. 28	-	-	5	-	-	1	-	-	-	-	-	2	-	-	*	8
Blackrock Urban District	Dec. 7	*	*	4	-	-	-	-	-	-	-	-	*	-	*	*	4
	Dec. 14	*	*	1	-	-	-	-	-	-	-	-	*	-	*	*	1
	Dec. 21	*	*	1	-	-	2	-	-	-	-	-	*	-	*	*	3
	Dec. 28	*	*	-	-	-	-	-	-	-	-	-	*	-	*	*	-
Kingstown Urban District	Dec. 7	*	*	2	-	-	1	-	-	-	-	-	*	*	1	*	4
	Dec. 14	*	*	1	-	-	-	-	-	-	-	1	*	*	1	*	3
	Dec. 21	*	*	2	-	-	-	-	-	-	-	-	*	*	2	*	4
	Dec. 28	*	*	-	-	-	-	-	-	-	-	-	*	*	1	*	1
City of Belfast	Dec. 7	*	*	30	-	-	7	-	-	-	2	-	*	*	1	*	40
	Dec. 14	*	*	27	-	-	9	-	-	-	5	-	*	*	3	*	44
	Dec. 21	*	*	24	-	-	5	-	-	4	5	-	*	*	3	*	41
	Dec. 28	*	*	16	-	-	8	-	-	-	3	-	*	*	1	*	28

a Continued Fever.

CASES OF INFECTIOUS DISEASES UNDER TREATMENT IN DUBLIN HOSPITALS.

During the week ended December 28, 1912, one case of measles was discharged from hospital and 1 case remained under treatment at the close of the week. In the three preceding weeks such cases were 2, 3, and 2 respectively.

Eighteen cases of scarlet fever were admitted to hospital, 24 were discharged, and 112 cases remained under treatment at the close of the week. This number is exclusive of 16 convalescent patients who remained under treatment at Beneavin, Glasnevin, the Convalescent Home of Cork Street Fever Hospital, Dublin. At the close of the 3 preceding weeks the cases in hospital were 123, 118, and 118 respectively.

Seven cases of diphtheria were admitted to hospital, 9 were discharged, and there were 2 deaths. The cases in hospital, which at the close of the 3 preceding weeks numbered 58, 53, and 59 respectively, were 55 at the close of the week.

Two cases of enteric fever were admitted to hospital, 4 were discharged, there was one death, and 29 cases remained under treatment in hospital at the close of the week, the respective numbers in hospital at the close of the 3 preceding weeks being 42, 35, and 32.

In addition to the above-named diseases, 8 cases of pneumonia were admitted to hospital, 5 were discharged, there were 2 deaths, and 19 cases remained under treatment at the end of the week.

ENGLAND AND SCOTLAND.

The mortality in the week ended Saturday, December 28, in 95 large English towns (including London, in which the rate was 14.4) was equal to an average annual death-rate of 15.1 per 1,000 persons living. The average rate for 18 principal towns of Scotland was 17.1 per 1,000, the rate for Glasgow being 18.9, and that for Edinburgh 18.0.

INFECTIOUS DISEASE IN EDINBURGH.

The Registrar-General has been favoured by A. Maxwell Williamson, M.D., B.Sc., Medical Officer of Health for Edinburgh, with a copy of his Return of Infectious Diseases notified during the week ended 28th December. From this Report it appears that of a total of 49 cases notified, 29 were of scarlet fever, 12 of phthisis, 5 of diphtheria, and 3 of erysipelas. Among the 356 cases of infectious diseases in hospital at the close of the week were 151 cases of scarlet fever, 98 of phthisis, 58 of diphtheria, 23 of whooping-cough, 10 of chicken-pox, 6 of erysipelas, and 2 of measles.

METEOROLOGY.

Abstract of Observations made in the City of Dublin, Lat. 53° 20' N., Long. 6° 15' W., for the Month of December, 1912.

Mean Height of Barometer, - - -	29.715 inches.
Maximal Height of Barometer (2nd, at 9 p.m.),	30.186 „
Minimal Height of Barometer (26th, at 9 a.m.),	28.966 „
Mean Dry-bulb Temperature, - - -	45.7°.
Mean Wet-bulb Temperature, - - -	43.5°.
Mean Dew-point Temperature, - - -	41.0°.
Mean Elastic Force (Tension) of Aqueous Vapour,	.263 inch.
Mean Humidity, - - - - -	84.5 per cent.
Highest Temperature in Shade (on 11th and 13th), - - - - -	57.2°.
Lowest Temperature in Shade (on 1st), - - -	28.7°.
Lowest Temperature on Grass (Radiation) (1st),	25.9°.
Mean Amount of Cloud, - - - - -	53.9 per cent.
Rainfall (on 23 days), - - - - -	1.888 inches.
Greatest Daily Rainfall (on 25th), - - -	.420 inch.
General Directions of Wind, - - - - -	S.W., W., S.

Remarks.

A “cyclonic month” of S.W. winds, clouds, frequent rain, and high but unsteady temperature. The North Atlantic Ocean was in a very disturbed state throughout, as depression after depression swept northwards or north-eastwards across its vast expanse of waters. The centres of the cyclonic systems travelled far outside the western seaboard of the British Islands, but secondary depressions passed along our coasts at frequent intervals, and on the 26th the centre of a very energetic cyclone crossed the southern districts of Ireland and England. Although the month was mild so far as temperature was concerned, it opened with an intense frost in Scotland. At Nairn the screened thermometer did not rise higher than 27° in the forty-eight hours ended 7 a.m. of the 3rd, and 7° was recorded at that station on the night of the 2nd. Aberdeen was almost as cold, the range on the 1st and 2nd being from 9° to 27°. At 7 a.m. of the 3rd the thermometer ranged from 52° in the Scilly Isles to 25° at Aberdeen. Another feature of interest in the climatology of

the month was the presence of a band or ridge of high atmospheric pressure, which, with a few interruptions, stretched from the Azores to Spain in one direction, and a similar high-pressure area centred over South Germany and spreading thence to Spain in the other direction. These anticyclonic systems caused sharp freezing in Bavaria and Germany, and some hard night-frosts in Madrid, especially in the third week. In Dublin, on the contrary, there was scarcely any frost after the 1st.

In Dublin the arithmetical mean temperature (46.1°) was 4.1° above the average (42.0°); the mean dry-bulb readings at 9 a.m. and 9 p.m. were 45.7° . In the forty-eight years ending with 1912, December was coldest in 1878 (M.T. = 32.8°), and in 1874 (M.T. = 36.8°); warmest in 1898 (M.T. = 47.6°), and in 1900 and 1905 (M.T. = 47.1°). In December, 1911, the M.T. was 44.5° .

The mean height of the barometer was 29.715 inches, or 0.160 inch below the corrected average value for December—namely, 29.875 inches. The mercury rose to 30.186 inches at 9 p.m. of the 2nd, and fell to 28.966 inches at 9 a.m. of the 26th. The observed range of atmospheric pressure was, therefore, 1.220 inches.

The mean temperature deduced from daily readings of the dry-bulb thermometer at 9 a.m. and 9 p.m. was 45.7° , or 1.1° above the value for November, 1912. Using the formula *Mean Temp.* = *Min.* + (*Max.* — *Min.*) $\times .52$, the value was 46.3° , or 4.2° above the average mean temperature for December, calculated in the same way, in the thirty-five years, 1871–1905, inclusive (42.1°). The arithmetical mean of the maximal and minimal readings was 46.1° , compared with a thirty-five years' average of 42.0° . On the 11th and 13th the thermometer in the screen rose to 57.2° —wind, S.W.; on the 1st the temperature fell to 28.7° —wind, E. The minimum on the grass was 25.9° on the 1st. There was only one frost in the screen, and only 6 nights of frost on the grass were recorded.

The rainfall was 1.888 inches, distributed over 23 days. The average rainfall for December in the thirty-five years, 1871–1905, was 2.250 inches, and the average number of rain-days was 17. The rainfall, therefore, was below, while the rain-days were considerably in excess of the average. In 1876 the rainfall in December was very large—7.566 inches on 22 days. In 1868

(which was otherwise a fine and dry year), 4.749 inches fell on as many as 27 days. In 1911 also, 4.073 inches fell on 26 days in December. On the other hand, in 1867, only .771 inch was measured on 13 days; in 1885, only .742 inch on 10 days; in 1892, only .795 inch on 10 days; and in 1871, only .797 inch on 15 days.

High winds were noted on 13 days, and attained the force of a gale on six occasions—the 11th, 13th, 19th, 24th, 26th, and 28th. The atmosphere was foggy in Dublin on the 2nd. Snow and sleet fell on the 1st; hail on the 1st and 26th. A lunar halo was seen on the 25th; a lunar corona on the 19th and 23rd. There was a lunar rainbow at 11 p.m. of the 27th.

The rainfall in Dublin during 1912 amounted to 27.649 inches on 208 days, compared with 23.477 inches on 189 days in 1911, 35.439 inches on 219 days in 1910, only 16.601 inches on 160 days in 1887, and a thirty-five years' (1871–1905) average of 28.000 inches on 198 days.

At the Normal Climatological Station in Trinity College, Dublin, Mr. C. D. Clark reports that the mean height of the barometer was 29.738 inches, the range of atmospheric pressure being from 30.19 inches at 9 a.m. of the 3rd to 29.00 inches at 9 a.m. of the 26th. The mean value of the readings of the dry-bulb thermometer at 9 a.m. and 9 p.m. was 46.6°. The arithmetical mean of the daily maximal and minimal temperatures was 45.9°. The screened thermometers rose to 58° on the 14th, 20th, and 27th, and fell to 28° on the 1st. On the 1st also the grass minimum was 22°. Rain fell on 20 days to the amount of 2.04 inches, the greatest fall in 24 hours being .41 inch on the 25th. The duration of bright sunshine, according to the Campbell-Stokes recorder, was 22.8 hours, of which 3.2 hours occurred on the 6th. The mean daily sunshine was only .74 hour. The mean temperature of the soil at 9 a.m. was 43.1° at a depth of 1 foot; at a depth of 4 feet it was 46.0°.

Captain Edward Taylor, D.L., sends the following return of the rainfall at Ardgillan, Balbriggan, Co. Dublin, for December, 1912:—(Height above sea level, 210 feet.) The total rainfall was 2.33 inches, or .66 inch below the average. On the 25th, the rainfall measured .28 inch, being the most in one day. The rain-days were 26, or 6 above the average. From January 1st

the rainfall measured 31.10 inches on 206 days, being 2.07 inches and 17 days in excess. The wettest December was that of 1910, 5.31 inches; the driest December was that of 1898, 1.41 inches. The wettest year (1893–1911) was 1910, with 34.71 inches; the driest year (1893–1911) was 1893, with 22.87 inches. The maximum temperature in the shade was 55.7° on the 20th; the minimum in the shade was 25.1° on the 1st,

Mr. T. Bateman reports that the rainfall at The Green, Malahide, Co. Dublin, was 1.715 inches on 21 days. The greatest fall in 24 hours was .49 inch on the 25th. The mean shade temperature was 41.4° , the extremes being—highest, 54° on the 11th; lowest, 27° on the 1st. The total rainfall for the year was 27.365 inches on 190 days.

The rainfall at the Ordnance Survey Office, Phoenix Park, Dublin, was 2.060 inches on 19 days, the maximum in 24 hours being .410 inch on the 21st. The total amount of sunshine was 33.0 hours, the largest daily amount being 4.6 hours on the 6th.

At Cheeverstown Convalescent Home, Clondalkin, Co. Dublin, Miss C. Violet Kirkpatrick reports that the rainfall was 3.02 inches on 27 days. The maximal falls in 24 hours were .39 inch on the 21st and again on the 25th.

Dr. Christopher Joynt, F.R.C.P.I., recorded a rainfall of 1.721 inches on 21 days at 21 Leeson Park, Dublin. On the 25th .410 inch was recorded. The total rainfall for the year was 26.900 inches on 199 days.

Dr. Arthur S. Goff reports that at Belfort House, Dundrum, Co. Dublin, rain fell on 24 days to the amount of 1.97 inches—.36 inch being measured on the 25th. Temperature ranged from 56° on the 3rd, 11th and 27th, to 28° on the 1st. The mean shade temperature was 45.9° Fahrenheit. Snow fell on the 1st.

At Manor Mill Lodge, Dundrum, Co. Dublin, Mr. George B. Edmondson measured 2.17 inches of rain on 21 days, the largest fall in 24 hours being .38 inch on the 25th. The mean temperature was 44.8° , the thermometer having fallen to 28° on the 1st and risen to 57° on the 7th.

Mrs. Olive F. Symes returns the rainfall at Druid Lodge, Killiney, at 1.60 inches on 21 days. The maximal fall in 24 hours was .40 inch on the 25th. The average rainfall in December at Cloneevin, Killiney, for the 24 years (1885–1908)

was 2.342 inches on 17.6 days. Mrs. Symes also returns the November rainfall at Druid Lodge. It was .86 inch on 9 rain-days, the heaviest fall in 24 hours being .30 inch on the 25th.

At the Sanatorium of the Dublin Joint Hospital Board, Crooksling, near Brittas, Co. Dublin, Dr. A. J. Blake, Resident Medical Superintendent, recorded a rainfall of 3.46 inches on 28 days. The heaviest day's rainfall was .54 inch on the 13th.

Dr. J. H. M. Armstrong, M.B., reports that at Coolagad, Greystones, Co. Wicklow, the rainfall in December was 2.82 inches on 26 days. Of the total amount .47 inch fell on the 25th. From January 1st to December 31st, 1912, rain fell at Coolagad on 214 days, to the total amount of 44.89 inches.

Mrs. Sydney O'Sullivan returns the rainfall at Auburn, Greystones, as 2.53 inches on 27 days, the heaviest fall in 24 hours being .41 inch on the 25th.

Dr. Charles H. Hanan, M.D., reports a rainfall of 2.82 inches on 24 days at the Royal National Hospital for Consumption for Ireland, Newcastle, Co. Wicklow, the maximal fall in one day being .30 inch on the 1st, when also some snow fell. The mean temperature of the month was 44.3° (mean max., 49.9° , mean min., 38.7°), and the extremes were—highest, 57° on the 13th and 14th; lowest, 29° on the 1st.

The Rev. Arthur Wilson, M.A., reports that rain fell on 31 days at the Rectory, Dunmanway, Co. Cork, to the amount of 10.43 inches, or 2.72 inches more than the average. The heaviest falls were 1.25 inches on the 20th and .88 inch on the 8th. The month was damp and unsettled, yet with several very fine and bright days, especially at the close. It was mild, and there were very few frosts.

RAINFALL IN 1912.

At 40 Fitzwilliam Square, West, Dublin.

Rain Gauge :—Diameter of Funnel, 8 in. Height of top—Above ground, 1 ft. 4 in. ; above sea level, 54 ft.

Month	Total Depth	Greatest Fall in 24 Hours		Number of Days on which .01 or more was recorded
	Inches	Inches	Date	
January, -	3.510	.765	6th	19
February, -	2.562	.590	18th	18
March, -	2.727	.438	20th	24
April, -	1.320	.873	21st	7
May, -	1.042	.301	19th	19
June, -	2.595	.259	2nd	23
July, -	3.055	.564	31st	17
August, -	5.277	1.456	4th	23
September, -	.570	.237	29th	8
October, -	1.665	.420	26th	13
November, -	1.438	.370	24th	14
December, -	1.888	.420	25th	23
Total -	27.649	1.456	Aug. 4th	208

The rainfall was 27.649 inches, or 0.351 inch less than the average annual measurement of the thirty-five years, 1871-1905, inclusive—viz., 28.000 inches.

It is to be remembered that the rainfall in 1887 was very exceptionally small—16.601 inches. In 1870 only 20.859 inches fell ; in 1884 the measurement was 20.467 inches ; in 1883 it was 20.493 inches.

The scanty rainfall in 1887 was in marked contrast to the abundant downpour in 1886, when 32.966 inches—or as nearly as possible double the fall of 1887—fell on 220 days. In 1900 the rainfall was 34.338 inches, or 6.338 inches in excess of the average for the thirty-five years, 1871-1905. In 1910, also, the rainfall was very large, 35.439 inches on 219 days. Only once since these records commenced has the rainfall in Dublin exceeded that of 1910—namely, in 1872, when 35.566 inches fell on 238 days. In 1880 34.512 inches were measured on, however, only 188 days.

In 1912 there were 208 "rain-days," or days upon which not less than .005 inch of rain (five-thousandths of an inch) was measured. This was 10 over the average number of rain-days, which was 198, in the thirty-five years, 1871–1905, inclusive. In 1868 and 1887—the warm, dry years of recent times—the rain-days were only 160, and in 1870 they were only 145.

On only one occasion in 1912 did one inch of rain fall on a given day in Dublin—viz., August 4th, 1.456 inches. In 1901, the rainfall only once exceeded one inch, but on that occasion (November 11th) the measurement was 2.037 inches. In 1902, 1.342 inches fell on July 25th, and 2.075 inches on September 2nd. An excessive rainfall on August 25th, 1905, is especially noteworthy—it amounted to 3.436 inches in Dublin (Fitzwilliam Square). On no previous occasion within the past 47 years had 3 inches or upwards been measured. It was the ninth occasion only since 1865—that is, in 47 years inclusive—upon which 2 inches have been measured in Dublin at 9 a.m. as the product of the preceding 24 hours' precipitation. The previous excessive falls were—August 13th, 1874 (2.482 inches); October 27th, 1880 (2.736 inches); May 28th, 1892 (2.056 inches); July 24th, 1896 (2.020 inches); August 5th, 1899 (2.227 inches); August 2nd, 1900 (2.135 inches); November 11th, 1910 (2.037 inches); and September 2nd, 1902 (2.075 inches).

Included in the 208 rain-days in 1912 are 7 on which snow or sleet fell, and 15 on which there was hail. In January hail was observed on 2 days, in February on 2 days, in March on 4 days, in April on 2 days, in May on 1 day, in November on 2 days, in December on 2 days. Snow or sleet fell on 1 day in January, 3 days in February, 1 day in March, 1 day in April, and 1 day in December. A thunderstorm occurred once in July. Thunder was heard without visible lightning once in July and twice in August. Lightning was seen once in January, once in July, once in August, and once in October.

The rainfall in the first six months of 1912 was 13.756 inches on 110 days. In the second six months it was 13.893 inches on 98 days.

The rainfall was distributed quarterly as follows:—8.799 inches fell on 61 days in the first quarter, 4.957 inches on 49 days in the second, 8.902 inches on 48 days in the third, 4.991 inches on 50 days in the fourth quarter.

Abstract of Meteorological Observations taken at Dublin (40 Fitzwilliam Square, West) during the Year 1912.

MONTH	Abs. Max.	Date	Abs. Min.	Date	Mean Daily Max.	Mean Daily Min.	Rainfall	Rain Days	Mean Height of Barometer	Highest Pressure	Date	Lowest Pressure	Date	Prevailing Winds
January	53.2	13th	27.1	30th	46.1	38.1	3.510	19	29.858	30.389	30th	28.721	6th	S.E., W.S.W.
February	57.8	22nd	23.8	3rd	48.1	39.2	2.562	18	29.543	29.961	14th	28.714	8th	S.E., S.W.
March	60.2	25th	33.7	11th	51.9	40.7	2.727	24	29.568	30.203	29th	28.740	4th	S.W., W.
April	62.2	16th	34.1	9th	56.2	42.7	1.320	7	30.183	30.499	14th	29.587	8th	W.N.W., N.E.
May	68.9	11th	38.9	13th	59.9	47.8	1.042	19	29.969	30.400	25th	29.510	15th	E., W.
June	68.9	12th	45.2	1st	63.0	51.2	2.595	23	29.765	30.031	26th	29.372	4th	W., S.W.
July	73.1	15th	46.9	19th	64.6	53.1	3.055	17	29.942	30.315	4th	29.283	29th	N.E., N.W.
August	65.9	16th	42.9	2nd	60.0	48.8	5.277	23	29.725	30.127	31st	29.270	29th	N.W., W.
September	68.8	3rd	43.3	13th	58.7	48.6	.570	8	30.185	30.506	19th	29.260	30th	W., N.W., S.E.
October	62.6	13th	32.1	4th	54.9	42.8	1.665	13	29.854	30.636	4th	29.037	30th	W., S.W.
November	64.2	7th	27.0	30th	49.6	40.9	1.438	14	30.005	30.450	1st	28.918	26th	W., S.W., N.W.
December	57.2	11th & 13th	28.7	1st	50.9	41.3	1.888	23	29.715	30.186	2nd	28.966	26th	S.W., W., S.
Extremes, Totals, and Means	73.1	July 15th	23.8	Feb. 3rd	55.3	44.6	27.649	Days 208	29.859	30.636	Oct. 4th	28.714	Feb. 8th	W., S.W., N.W.
					50.0°									

JOHN WILLIAM MOORE, M.A., M.D., D.P.H., Dublin; D.Sc. Oxon.; F.R.C.P.I.;
F. R. Met. Soc.

More or less fog prevailed on 19 occasions—2 in January, 3 in February, 2 in March, 3 in April, 1 in May, 1 in September, 4 in October, 2 in November, and 1 in December. High winds amounted to gales (force 8 or upwards, according to the Beaufort scale) on 17 occasions—1 in January, 3 in February, 1 in April, 1 in August, 2 in October, 3 in November, and 6 in December.

Solar halos were seen on 15 occasions. a lunar halo on 12 nights, a lunar corona on 11 nights.

The Rev. Arthur Wilson, M.A., reports that at the Rectory, Dunmanway, Co. Cork, the total rainfall for 1912 was 64.97 inches on 241 days, which is 9.24 inches and 14 days *over* the average of the last 7 years. The heaviest rainfall was in 1911, in which year 66.10 inches fell on 215 days. November, 1911, had 9.60 inches on 22 days and December, 1911, 12.41 inches on 31 days. April, May and September, 1912, were very dry, September having the longest period of absolute drought (21 days) and April the second lowest rainfall (.45 inch) recorded in the last 8 years. July 22nd had the second heaviest rainfall (1.96 inches) in 24 hours. The heavy frost of June 3 did much damage to the potato crop. The first half of August also had several night frosts.

TYPHOID FEVER IN CHILDHOOD.

FROM their experience of epidemics of typhoid fever in Tunis, and from a great mass of statistics, MM. C. Nicolle and E. Conseil conclude that :—(1) The suckling has a relative immunity to typhoid fever ; and when it does appear it is usually in a benign form, almost impossible of recognition in the absence of an epidemic. (2) The typhoid of infancy, therefore, from the point of view of contagion, is of equal importance to that of the adult ; its non-recognition tends to the conservation of the virus and the creation of foci of the disease. (3) From this reason above all, typhoid in infancy merits the study of the epidemiologist and the physician.—*Gazette des Hôpitaux*, 85^e Année, No. 42.

PERISCOPE.

THE SURGERY OF COLONIC CONSTIPATION.

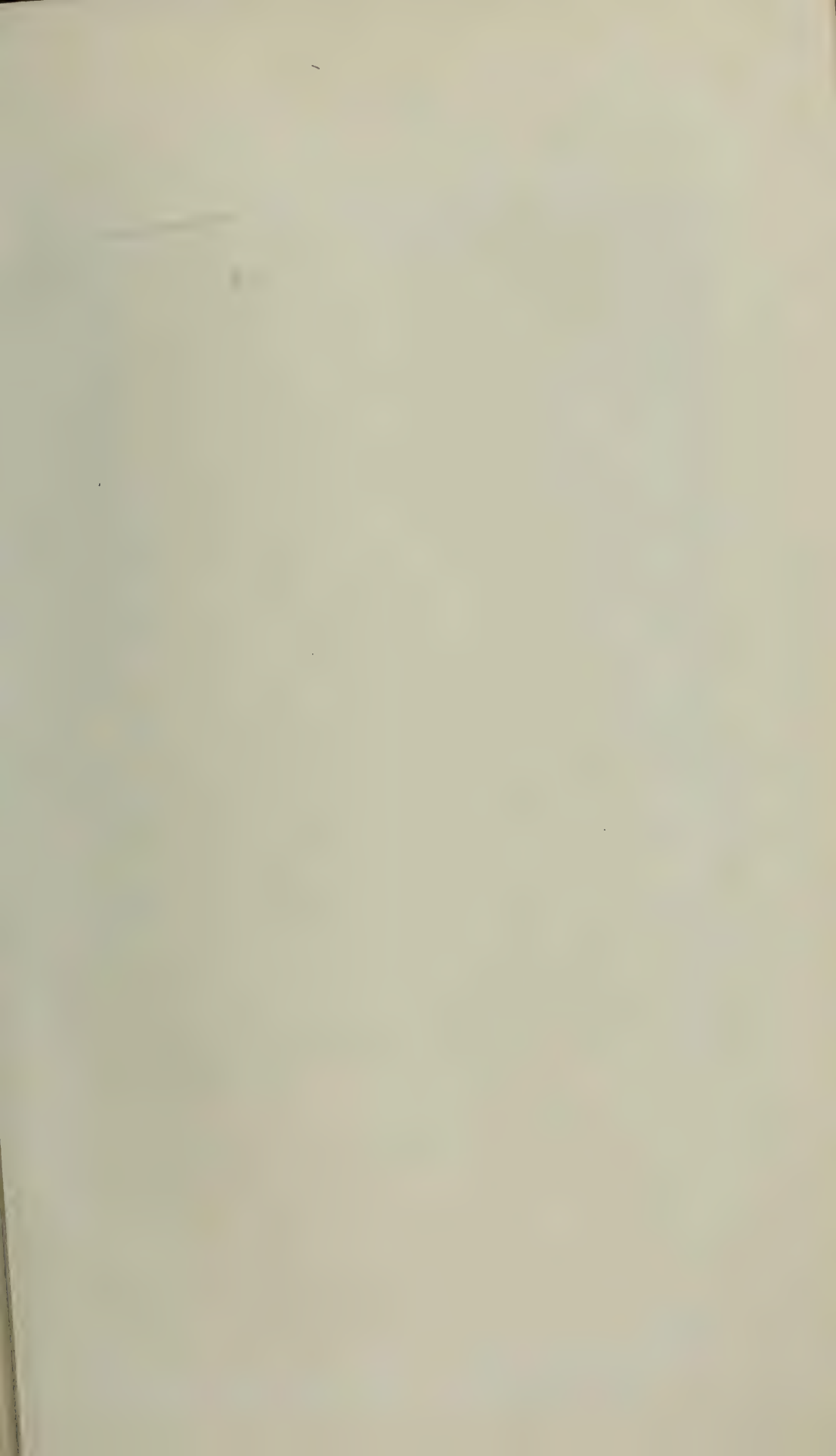
AFTER presenting the histories, radiographs and reports of operative treatment of thirteen cases of obstipation due to colonic obstruction, dilatation, stricture, and adhesions, Dr. Louis J. Hirschman, of Detroit, Mich., in a paper read before the Annual Congress of the American Proctologic Society, 1912, stated that he had formulated several principles in dealing with his cases requiring colonic surgery. They are epitomised in the following conclusions:—(1) Most cases of chronic constipation are colonic in origin, and many are obstructive in type. (2) Many cases of so-called chronic constipation are, therefore, really colonic obstipation. (3) Many cases of colonic obstipation suffer from chronic dilatation of the colon with or without ptosis. (4) Radiography is a most vital necessity in the diagnosis of all cases of chronic interference with bowel function. Its negative value may be greater than its positive. (5) A chronically over-distended colon, whether adherent or not, never again becomes a normally functioning bowel. (6) Intestinal adhesions usually tend to recur in increased intensity, and adhesions cause symptoms only when put under stress or tension. (7) The prevention of tension is physiologic rest to the affected organ, and colonic rest is obtained only by colectomy, colostomy, or exclusion. (8) Colectomy, as advocated by Lane, is an operation seldom advisable, and has many obvious objections from the standpoint of patient and physician. It is too grave a procedure to be undertaken except in the most aggravated cases. (9) Strictures, neoplasms, and other obstructions should be removed by excision of the diseased tissue and lateral anastomosis of the bowel. (10) Exclusion by ileo-colostomy is safe, easy to perform, and most satisfactory in the restoration of normal peristalsis, and consequently normal health. (11) Results speak more eloquently than words. After an experience with nearly fifty cases requiring exclusion or resection of the colon for obstructive constipation, with but one failure, the

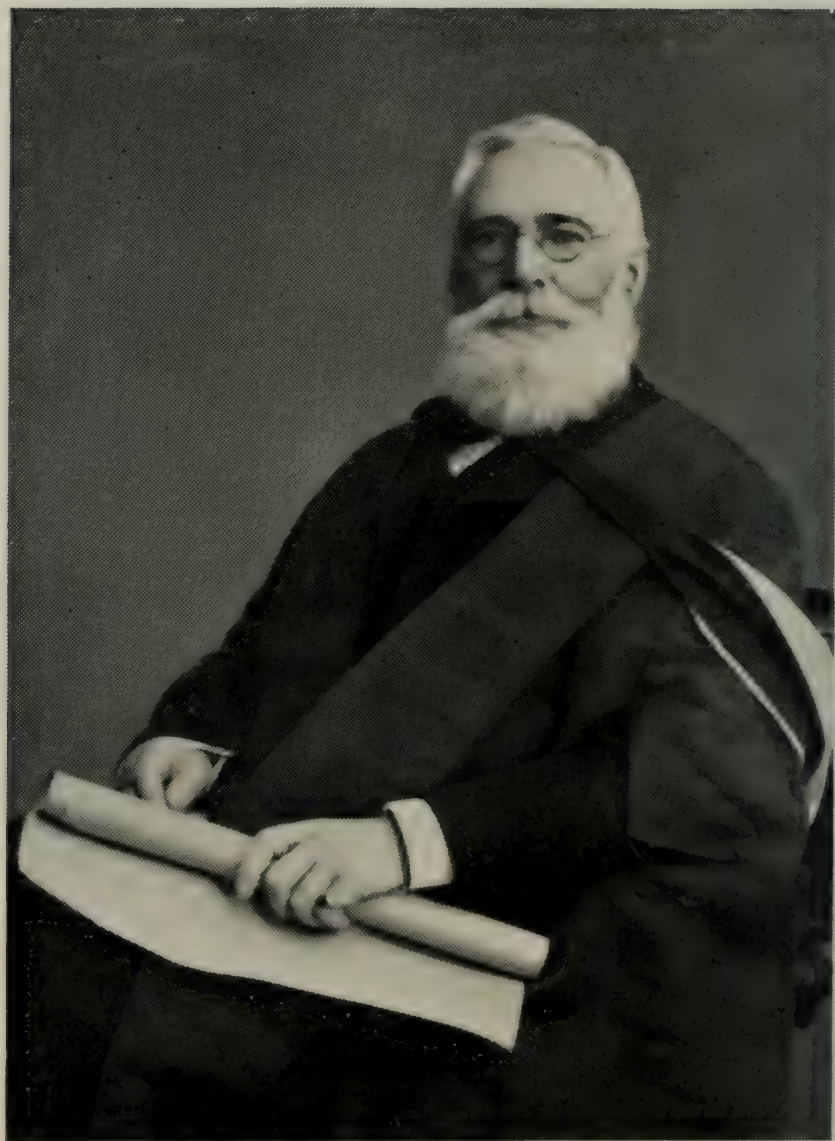
author felt fully justified in recommending it to careful consideration in all cases of aggravated colonic obstipation, whether congenital, post-operative, or dependent on some mechanical obstruction or narrowing of the bowel.

THE ANÆMIA OF PATIENTS WITH ENTERITIS.

IN a paper on "L'Anémie des Entéritiques," published in *Le Progrès Médical*, Professor M. Loeper, of Paris, states that anæmia is not rare among patients with enteritis, either acute or chronic, whether the patients be young or adult. This anæmia is usually met with in certain cases of choleriform enteritis when microscopical examination shows the presence of bacilli resembling *Bacillus coli*, paratyphoid bacillus. *Bacillus perfringens* and enterocolic bacilli. The blood count may rapidly fall to 2,500,000 or even 2,000,000 red corpuscles. This form of anæmia is rather frequent in torpid intestinal conditions, muco-membranous enteritis, intestinal dyspepsia, atony of the cæcum or cæcal dilatation (typhlectasis), and then occurs in intermittent attacks, appearing at the same time as an increase in the intestinal symptoms. This anæmia, connected both with hypohæmatæmia and with hypohæmoglobinæmia, is frequently accompanied by slight icterus. lowered arterial tension, urobilinhæmia, but not by choluria: the spleen is often hypertrophied, and there may also be an increase in the size of the liver. One may easily understand why anæmias which have their origin in the liver with intestinal troubles and abdominal pains should be often mistaken for liver attacks since both are characteristised by the same discolouration of the skin and by an almost exactly similar localisation of the pains. Vomiting, however, as well as the spreading of pain towards the shoulders, and urinary pigments. are generally absent, and the condition is improved not by treating the liver, but by treating the intestine, a point of the utmost importance. The examination of the stools reveals a slight insufficiency in the transformation of protein; the bacteria most frequently found are, as already stated, the *Bacillus perfringens*, enterococci and coliform bacilli. If we try to investigate the nature of these anæmias, we clearly realise that they are the result of a hæmatolytic process; still the resistance of the corpuscles is generally less, the auto-agglutination of the red corpuscles is absent, but the increase

in the hæmatolytic power of the serum is almost constant. The hæmatolysis is therefore the result of an exaggeration in the destructive power of the serum in regard to the red corpuscles, and not of a weakness of the red corpuscles themselves. If injected into rabbits, the serum of anæmic enteritic patients very often causes a diminution in the resistance of the corpuscles, and almost always a fall in the number of red corpuscles, this fall being much greater than with normal human serum. The hæmatolytic substance is also hypotensive, since these patients have always a tension below normal; it passes in the urine, since the sediment of this excretion experimentally produces hypotension and anæmia. The hæmatolytic substance, which is certainly organic, seems to be produced in some cases by the ferments which are absorbed all along the alimentary canal; in other cases by bacteria—namely, *B. perfringens* and *B. coli*—the hæmatolytic action of which is well known; in other cases again by the hypersecretion of the intestinal cells or even by their destruction. No doubt the bacteriolytic products play a prominent part in cases of acute enteritis; the products of a cellular origin, the cytolsins, have an importance which seems to be greater in chronic cases. If extracts of the intestinal mucous membrane, and especially of the mucous membrane of the ileum and colon, are injected into animals, a distinct anæmia is produced; and the hæmatolysing action of these extracts is increased by the addition of pancreatic ferments. Therefore the absorption by the inflamed human intestine of pancreatic ferments and of intestinal products is an important factor in hæmatolysis. In its normal condition, the liver prevents the hæmatolysing action of all these substances, but its stopping function is greatly disturbed in enteritis. The foregoing investigation leads to the following practical rules in the treatment of enterogenous anæmia: disinfection of the intestine even with lactic bacteriotherapy and aperients in small repeated doses; strengthening of the powers of the liver by salts of magnesium; increase in the resistance of the blood by lipoids, and regeneration of the blood by calcium and iron products.





PETER REDFERN, M.D., D.Sc., F.R.C.S. Eng.;
Emeritus Professor of Anatomy and Physiology, Queen's College, Belfast

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PART I.

ORIGINAL COMMUNICATIONS.

ART. VII.—*The Mental Deficiency Bill and its Proposed Extension to Ireland.*^a By WILLIAM R. DAWSON, M.D., D.P.H. Dubl. ; F.R.C.P.I. ; H. M. Inspector of Lunatic Asylums for Ireland ; late Medical Investigator under the Royal Commission on the Feeble-minded ; Ex-President of the Medico-Psychological Association.

EVER since the publication of the Report of the Royal Commission on the Care and Control of the Feeble-minded it has been the hope of those who have at heart the welfare of the mentally deficient that legislation would be introduced by Government to give effect to the recommendations of that Report. As time went on, however, and no such action was taken, a short Bill was introduced under the auspices of the National Association for the Feeble-minded and of the Eugenics Education Society, which was read a first time on February 19th, 1912, and has now passed the Committee stage. This, which is entitled the *Feeble-minded Persons (Control) Bill*, was followed on April 15th last by a long and ambitious measure—the *Mental Defect Bill*—supported by the Charity Organisation Society, and

^a Read before the Section of State Medicine in the Royal Academy of Medicine in Ireland, on Friday, January 17, 1913.

covering the whole ground dealt with by the recommendations of the Royal Commission. Finally, on May 16th, 1912, the Government introduced the *Mental Deficiency Bill*. This was read a second time on July 19th, 1912, and was referred to Standing Committee B, which met sixteen times, but, owing chiefly to the obstructionist tactics pursued by two members, succeeded in dealing with only seven clauses out of a total of sixty-eight. These, however, are the most important of the Bill, and on December 3rd the amended clauses were ordered to be printed as a short separate Bill in order that they might be reported to the House. Owing to the congested state of Parliamentary time, however, the Government decided to postpone the measure, and the report stage was not taken; but a promise was given that the same, or a similar, measure would be introduced next session, so that it may be hoped that all the good work done in Committee will not be lost, nor all the expectations founded on the introduction of the Bill falsified. All the three measures above mentioned were in the first instance made applicable to England and Wales only, and this is still the position as regards the two private Bills; but at the time of the first reading of the Government Bill action was taken by the Scottish authorities, as the result of which Scotland has been included in its provisions. Despite strenuous efforts in various quarters, however, it has not yet been possible to secure the extension of the measure to Ireland, notwithstanding the fact that, in contrast to both the sister countries, Ireland possesses no legal powers to deal with mentally defective persons who are not lunatics, and consequently no means of providing for them except one small institution—the Stewart Institution—which has only room for about one hundred. Yet, according to the estimate of the Royal Commission, there were in this country in 1906 no less than 25,415 mentally defective persons outside of the asylums, representing 0.62 per cent. of the population, as against 0.46 per cent. of the same class in England; and whereas in the latter country only 45 per cent. of such

defectives required immediate provision, in Ireland the proportion was 66 per cent. The corresponding figures for Scotland were still lower than those for England. It is, therefore, most disappointing that the country which is, of the three, the most urgently in need of provision should be that one which is expressly excluded from the scope of the measure.

The amendments in Committee were of a somewhat drastic character, but on the whole have greatly improved the Bill. The clauses dealt with are as follows :—

Clauses 1 and 2 settle the constitution of the central authority, but with these, as they apply only to England, we have nothing to do.

Clauses 7, 8, and 12 apply to the local authorities and their duties, and will be considered later.

Clause 17 defines the persons subject to be dealt with as being defective.

Clause 68 gives the short title, extent, and date of commencement of the Act.

The most important clause is Clause 17, which specifies the persons subject to be dealt with under the Bill. In general it may be stated that these are mentally deficient persons who have already come in contact with some department of the law, whether criminal-law, poor-law, or what not ; so that the measure extends over only part of the ground covered by the recommendations of the Royal Commission. In more detail, the provisions of the Bill are applicable to such idiots, imbeciles, feeble-minded persons, and moral imbeciles as are found neglected, abandoned, or cruelly treated ; or are found guilty of any offence ; or are or may be ordered to be sent to an industrial school, or are in a prison, reformatory, industrial school, or inebriate reformatory ; or are habitual drunkards as defined by the Inebriates Acts ; or are in receipt of poor relief at the time of giving birth to an illegitimate child ; or in whose case such other circumstances exist as may be specified in regulations to be made by the Secretary of State as being circumstances which make such persons

injurious or dangerous to themselves or to the community. The application of the last paragraph is safeguarded by a provision that all such regulations must lie on the table of each House of Parliament for thirty days, and may be blocked by an Address to His Majesty from either House within that time. Certain defective children dealt with by the local education authority under the Education Acts are also included, but as there are no local education authorities and no corresponding legal provisions in Ireland this paragraph could not be made applicable to this country.

The first part of Clause 17, as above abstracted, contains a very important amendment. Paragraph 17 (1) (e) in the original Bill included amongst those to be dealt with defectives "in whose case it is desirable in the interests of the community that they should be deprived of the opportunity of procreating children." This paragraph was the cause of a good deal of misgiving, which in certain cases culminated in active opposition, some even taking the absurd view that it would open the door to operative sterilisation of the unfit. There can be little doubt that the original paragraph was too vague and might have given rise to abuses, and much of the evil against which it was aimed can probably be dealt with to a large extent under the paragraph substituted for it in the amended clause, to which no such exception can be taken, this specifying defectives "who are in receipt of poor relief at the time of giving birth to an illegitimate child or when pregnant of such child." Indeed, if the remainder of the Bill is properly administered the original provision would be unnecessary.

Another stumbling-block to the weak was the second sub-clause of Clause 17, in which the various forms of mental defect to be dealt with were defined, but these definitions have now been greatly improved, and are probably as good as any that can be devised for their purpose. That of "feeble-minded persons," to which most exception was taken as originally framed, now reads :—

"Feeble-minded persons; that is to say, persons in

whose case there exists from birth or from an early age mental defectiveness not amounting to imbecility, yet so pronounced that they require care, supervision and control for their own protection or for the protection of others ; or, in the case of children, are incapable of receiving proper benefit from the instruction in ordinary schools.”

It was originally intended to include another class of defectives—viz., that of persons who have become mentally infirm from age or decay of their faculties. But not only does this class differ from the others in character, and to a large extent in the provision required, but its inclusion would have led to the filling up of the new institutions with senile demented, and so to their diversion from the primary object of their creation. Such inclusion would also have given rise to financial anomalies and to administrative difficulties, and on all grounds it is a matter for congratulation that it was wisely decided to withdraw the class from the scope of the Bill.

As regards the method of dealing with defectives to whom the provisions of the Bill are applicable, it need only be mentioned that two courses are open to the judicial authority with whom the decision rests, according to the gravity of the case, viz., detention in an institution for defectives, or the appointment of a suitable person as guardian.

The carrying into effect of the provisions of the Bill is to be placed in the hands of a central authority or board of control, and of local authorities consisting of the County and Borough Councils respectively, who are to act through committees, as is already done in the case of asylums. The local authorities having ascertained what persons in their district are subject to be dealt with, are to be responsible for providing the necessary accommodation, and to arrange for guardianship ; but no obligation to incur expense will be entailed unless one-half of the net cost of maintenance is found by Parliament. A total contribution of £150,000 per annum by Parliament is authorised, but this is in addition to payments made for

persons transferred from Government institutions, such as prisons, reformatories, &c.; this provision, however, has not yet been considered in Committee.

Many of the persons to be dealt with under the Bill are already, though unsatisfactorily, provided for in asylums, workhouses, prisons, reformatories, and other institutions, and, therefore, their transfer to establishments of the kind contemplated would tend to lessen the expense of the existing institutions, and as regards asylums to reduce the overcrowding which is so very general; while, once the new institutions are established, the Imperial contribution would tend to a relief of the rates. As regards the numbers to be provided for, it is difficult to form an estimate with any degree of accuracy. That of the Royal Commission on the Feeble-minded was, as has been seen, 25,415 for the whole of Ireland in 1906, but this included the mentally infirm not now dealt with by the Bill, and estimated at 8,900, and also 1,200 sane epileptics, so that if these be deducted the number of defectives outside of asylums would be 15,315. If two-thirds of these require immediate provision, the number may be placed at approximately 10,000, but this would not include such defectives as might be transferred from asylums. It is obvious that any proportion of the £150,000 likely to be assigned to Ireland would go a very short way with such numbers, and it is to be hoped that when the financial clauses are considered a more liberal contribution may be decided on. In view of the opinion of the Royal Commission on the Feeble-minded also, and of the peculiar circumstances of the country, it would not be unreasonable to expect a special building grant-in-aid towards the establishment of the necessary institutions.

It has been seen that the Bill by no means covers all the ground, and at the worst will only deal with a small proportion of the mental defect of the country. Even at that, however, it will make a beginning which otherwise is not in sight, since there are many other measures required appealing much more to the general public—

education, poor-law reform, and main drainage might be instanced—which, if this opportunity is lost, may crowd out any legislation for the defective, perhaps for another generation; and what the supporters of the extension of this measure to Ireland feel is that, though the Bill may have its faults, it is far better than nothing, and that if this chance is lost there may not be another in our time. Meanwhile, hundreds of non-insane defectives are being left to drift into lives of degradation, crime, and disease, and are handing on their own defects, often in aggravated degree, to their hapless and too frequently illegitimate offspring, thus producing an ever increasing crop of degeneracy, and building up an ever increasing burden of expense to the community.

ART. VIII.—*A Case of Juvenile Tabes.*^a By T. GILLMAN MOORHEAD, M.D., F.R.C.P.I.; Physician, Royal City of Dublin Hospital.

THE following case of tabes dorsalis occurring in early life, and probably the result of inherited specific disease, is worthy of record, even though the term “juvenile tabes” may not be strictly applicable. In most cases of the juvenile type the first appearance of symptoms has taken place in childhood, but as far as the type of the disease is concerned the mere accident of commencing a few years earlier or later seems to make little difference.

CASE.—The patient, a girl, aged twenty-two, engaged in clerical work, was first seen in November, 1912, by Dr. R. de C. Wheeler, who diagnosticated the condition and sent her to me for observation in hospital. She had consulted Dr. Wheeler for pains in the legs, which she regarded as rheumatic in origin, and for unsteadiness in walking. These symptoms had first become noticeable about eight months previously, and had latterly become so troublesome that she had given up out-of-door exercise owing to her objection to being seen staggering about. No definite family history of

Read before the Section of Medicine in the Royal Academy of Medicine in Ireland on Friday, January 31, 1912.

specific disease could be obtained. Her mother is alive and well; her father died about ten years ago following an operation for amputation of the leg. The amputation was stated to have been performed owing to the existence of a chronic ulcerous condition of the ankle and leg. The patient has two brothers and one sister. The brothers are both younger than herself; one of them is subject to epilepsy, and the other has been troubled for years with a purulent nasal discharge. The sister older than the patient is in good health. The only member of the family whom I was able to see apart from the patient herself was the mother, and she professed entire ignorance when questioned on the possibility of either her husband or herself having had specific disease. She had had miscarriages, but was indefinite as to their number. Most careful inquiry into the personal history of the patient failed to elicit any fact that would suggest that she might have suffered from acquired syphilis. There was no history of illness in early life such as might suggest accidental infection, and as the hymen was intact at the time of examination a genital origin of the disease can almost certainly be excluded. The patient was most emphatic in her denial of the possibility of such an infection taking place. No signs of old congenital specific disease were observed, but unfortunately the upper front teeth had all been extracted, and so the possible sign in them was unavailable. A year before the pains and unsteadiness in gait were noticed there had been for a short time some incontinence of urine and slight difficulty in emptying the bladder. This was probably the first symptom of the disease, and occurred when the patient was twenty-one.

On examination in hospital the girl presented the typical phenomena of rather early tabes dorsalis. Her gait was decidedly ataxic, a marked Romberg sign was present, knee-jerks and ankle-jerks were completely absent, the Argyll-Robertson pupil was present, and the pains complained of were of a typical lightning character. Slight dulling of tactile sensibility was noticed in the lower third of both legs. There was no optic atrophy, and indeed no retinal change. No other abnormalities, visceral or otherwise, were detected. A lumbar puncture was refused, but a Wassermann blood test, carried out on two occasions, gave a full positive result. An intravenous injection of .4 gramme

salvarsan was given, and a fortnight subsequently the Wassermann test was negative. It has not since been tested. During the last few days gastric pain of the nature of gastric crises has been complained of.

While admitting that it is practically impossible to exclude with certainty the possibility of acquired syphilis in any given case, I feel that it is almost certainly excludable in this case. The presence of a full positive Wassermann test is of extreme interest. Very few patients who have suffered from congenital syphilis have had their blood subjected to this test in adult life, but as most infants born of syphilitic parents give a positive reaction in early life it is, I think, fully conceivable that congenital syphilis, mild, possibly latent, and certainly untreated, should give rise to a positive Wassermann test in adult life, and at the same time produce undoubted tabes dorsalis. Should, however, it be judged by others that the record of the case is in itself conclusive in favour of acquired syphilis, it is, I think, none the less of interest from its early development and from the sex of the patient.

ART. IX.—*Rheumatism in Children.*^a By J. H. CRANE, B.A., M.D., B.Ch., B.A.O. Univ. Dubl., Rossall School, Fleetwood, Lancashire.

SINCE starting practice I have had the care of several schools, consisting both of boys and girls, as well as hospital experience, and so have had ample opportunity of studying the various phases of rheumatism in children. There are few complaints more common and few more serious, and, in my opinion, it is the cause of a great majority of the heart troubles one meets with in adult life, owing to neglect in childhood. It is a disease about which we, as doctors, cannot be too careful and in relation to which our responsibility is very great, considering the serious harm that may be done to the heart, if overlooked

^a A Thesis read for the Degree of Doctor of Medicine in the University of Dublin, December 18, 1912.

or neglected. The ordinary conception of acute rheumatism as characterised by swollen, tender, and painful joints, profuse sour-smelling perspiration, and high pyrexia, is drawn from the observation of rheumatism as we see it in adults. In them arthritis is one of the most constant and prominent of the morbid phenomena. This description, however, does not represent it as seen in children; at this period of life it has a much wider pathological range, and its phenomena are more various and comprehensive. In the rheumatism of children arthritis is at its minimum, whilst pericarditis, endocarditis, chorea and subcutaneous nodules are at their maximum. In childhood also the tendency is for the various phases to arise independently and apart from each other, so that the series of rheumatic events is often spread over months, years, or even a whole childhood.

INCIDENCE OF SEX.

In adult life, rheumatism falls pretty equally on males and females, perhaps a little more heavily on the former, but in children, however, the case is just the reverse, girls suffering most.

HEREDITY.

There are, in my opinion, few diseases in which heredity plays a more definite part. One will constantly find on inquiry into the family history of children who are suffering from rheumatism, that other members of the same family have been similarly affected. Different authors point out certain typical facies to be made out in children predisposed to rheumatism, but those described by Hutcheson best suit the majority of cases that have come under my notice—viz., “dark complexion, dark hair, dark brown eyes, long dark eyelashes, a very clear delicate skin, very good complexion, and they have often well formed massive teeth and particularly large square upper incisors.”

PATHOLOGY.

I think it is now pretty generally accepted that rheumatism is an acute specific disease, caused by a specific micro-organism, usually spoken of as the "Micrococcus rheumaticus." This organism is Gram-staining, and is easily obtained from the substance of inflamed synovial membrane. A part where there is special congestion should be chosen. It can also be cultivated from the blood. By what route this organism enters the body is still *sub judice*, but the balance of opinion seems to lean towards the throat as the chief route, and in the majority of cases I have seen, the throat was in an unhealthy condition. Having gained access to the body, it tends to attack certain tissues in children more than others, and in particular fibrous tissues and membranes, such as the valves of the heart, tendons and sheaths of muscles, whereas the joints appear to escape altogether, or are only slightly affected. In this way the disease in children differs very widely from that in adults. Poynton, Pain, Hertz and others have quite recently inoculated rabbits with the Micrococcus rheumaticus obtained from human beings, and the following is a summary of the results they obtained :—In the rabbits thus inoculated it set up carditis, arthritis and other lesions, and histological examination revealed that these included all the phenomena found in the rheumatic lesions of human beings.

AGE INCIDENCE.

I think I may say that rheumatism is practically never seen in children under two or three years of age, and from nine to twelve seems to be the most susceptible time.

SYMPTOMS.

I shall group the different symptoms as follows, on the understanding that perhaps only one or more may be present at one time, and shall then discuss each symptom

separately :—(1) Pericarditis, endocarditis, myocarditis ; (2) muscular and fascial pains ; (3) rheumatic nodules ; (4) erythematous eruptions ; (5) tonsillitis ; (6) joint affections ; (7) chorea ; (8) pleurisy ; (9) abdominal pains ; (10) headache ; (11) nervous temperament ; (12) wasting ; (13) anæmia.

The heart symptoms are the most important, and it is these that make the disease in children such a serious one. Unfortunately, too, about 70 per cent. of rheumatic children manifest such symptoms in a greater or less degree. Of these endocarditis is the most common, and is often the first to make its appearance. In the majority of cases, however, we find the endocarditis associated with peri- or myocarditis, and often also we find the three present at the same time. This condition is spoken of as carditis. The mitral valve is the region most often attacked. The edges of the affected valves become swollen, thickened and much vascularised. Granulations form on it, which are soft and friable, and, for the most part, found a little way from the free edges of the valve curtain. From these, emboli may be swept off into the circulation. As a result of these inflammatory changes, we get valvular lesions produced, either stenotic or regurgitant, which are made evident to us by murmurs. I have seldom seen a case of rheumatic pericarditis in which there was not also endocarditis, and this has been impressed on me by the findings of *post-mortem* examinations. The onset of pericarditis is usually insidious, and is sometimes marked by vomiting. There is seldom much effusion, and this is not purulent. It is usually subacute in character and shows a great tendency to recur. The clinical picture of rheumatic pericarditis can be easily summed up. A child who has already had some other rheumatic complaint begins to vomit, has shortness of breath, with pain over the region of the heart. On examination we find three very typical symptoms—friction, dilatation, a rapid and rather tumultuous beat. In addition to these there are two other symptoms very

suggestive—viz., pallor of the face and great restlessness. Vomiting is an important and early symptom, and when one gets a rheumatic patient suddenly attacked by vomiting, one should always examine most carefully for pericarditis. I think very often too little attention is paid to the area of cardiac dulness, and percussion may give us some very useful information, as dilatation occurs very rapidly, and if careful note is taken from day to day the changes of cardiac dulness are often very striking. This rapid extension of cardiac dulness is very strongly in favour of pericarditis. With pericarditis, and also with endocarditis, there is always some degree of inflammation of the myocardium, or rather perhaps of the intermuscular connective tissue, extending to the muscle fibres themselves. Small-celled infiltration between the muscle fibres is found, the fibres themselves being swollen, blurred in outline, with numerous nuclei, and later on a development of fibrous patches. In mild affections these changes lead only to a slight temporary dilatation with increase of dulness to the left, some impurity of the first sound at the apex, and accentuation of the pulmonary second sound. If, however, the affection is more severe, serious and permanent dilatation results.

The muscular and fascial pains are worthy of special notice, not because they of themselves are important, but because they very often give timely warning of more serious symptoms that are usually associated with them—viz., heart troubles. A mother very often brings her child with the complaint that he is feeling “out of sorts” and has been troubled with “growing pains.” These “growing pains” are simply manifestations of muscular and fascial rheumatism, and many a diseased heart in adults is the outcome of these “growing pains” having been neglected in childhood. The presence of these pains makes it necessary for us to keep a strict watch on the heart, as they may be associated with, or followed by, very serious cardiac disease.

Subcutaneous nodules are another special feature of this

malady in children. Whilst extremely common in the young they are very rare in adults. They may appear in connection with any of the other symptoms, but are mostly associated with heart troubles, and so are of serious import. They tend to occur under the skin where bones come close to the surface—viz., over the spines of the vertebræ, along the shins, over the patella and olecranon, along the back of the forearm and under the scalp. They are also found along tendons of muscles. They vary in size from that of a hemp seed to that of a pea or small bean. They are usually more easily felt than seen. When examined microscopically they are found to consist of a nuclear growth of fibrin in all stages of transformation into fibrous tissue; a network of fine vessels can be seen passing on to the surface of the deposit, but it has no capsule. They are analogous to the deposits found on the valves of the heart, and their association almost always with endocarditis is strong evidence that they are due to the same cause—the rheumatic irritant—and so are of the greatest importance as “danger signals,” showing that there is progressive trouble going on in the heart.

Erythematous eruptions are very common in children's rheumatism; not so in adults. The most common are erythema circinatum, urticaria, peliosis rheumatica, and erythema nodosum. Erythema nodosum usually occurs over the shins. The lesions consist of purplish red, tender swellings, often of the size and shape of a split almond. They go through the same colour changes as an ordinary contusion. They appear in crops, each crop lasting a few weeks.

Tonsillitis and inflammation of the naso-pharynx occur so frequently just previous to, or during an attack of rheumatism, that it is very difficult to escape the conclusion that they bear some direct relation to it, and of late years great stress has been laid on the possibility of the naso-pharynx and tonsils being the chief sources of infection. In the majority of cases that have come under

my notice the throat has been in a bad condition, the tonsils being large, inflamed and full of pits, and the nasopharynx in a congested condition. These parts, in my opinion, form an excellent breeding ground for the *Micrococcus rheumaticus*.

I have already mentioned joint pains. They are often so slight as to be altogether overlooked. There is less swelling and tenderness, less pain and fever, than in adults. It is a very rare occurrence to see a child lying motionless in bed, bound hand and foot, and fearing to move on account of joint pains. There is usually merely a little pain, stiffness and tenderness, with little or no perceptible swelling. The most common complaint that I have seen is stiffness and tenderness at the back of the knee and in the hamstring tendons, the patients walking on their toes, with the knee slightly bent. This slight arthritis is misleading, and has often led to diagnosis of scurvy, infantile palsy or syphilitic disease, but the early recognition of the true cause is most essential, as an insidious endo- or pericarditis may be at work concurrently with it. Scurvy may be distinguished by the periosteal position of the swelling and also that it is invariably confined to the shafts of long bones. In addition, spongy gums, subcutaneous hæmorrhages, hæmaturia or albuminuria may also be present. One can always try the effect of anti-scorbutics. In infantile palsy there is extreme flaccidity of the muscles, the affected limbs are limp and hang down loosely, whilst the tenderness is more diffuse. At a later period the tendon reflex and faradic contractility disappear. In syphilitic disease there is swelling and tenderness from the periostitis present, and one will nearly always find other evidence of congenital syphilis and perhaps elicit a syphilitic history. The inflammation of joints then being so slight in children one does not get the profuse acid perspirations or the pyrexia seen in the case of adults.

I have always regarded chorea as a manifestation of rheumatism in a large proportion of cases, and some

writers go so far as to say that every case of chorea is rheumatic in origin. It is, indeed, well to regard every choreic patient as a probable rheumatic, and be ready to treat them as such, as chorea is often the first of the rheumatic symptoms.

Pleurisy is not so uncommon a symptom as some practitioners believe. It is most usually found on the left side, and seems to be of common occurrence where severe carditis is present, as *post-mortem* examinations on these cases show. It is usually of a dry nature, and if any effusion is present it is generally very slight. Goldschreder records having isolated a diplo-streptococcus from a pleural effusion.

A fairly common complaint in rheumatic children is pain in the stomach, and especially so in those who have complained of slight pain in joints or limbs. It is generally situated in the epigastrium around the umbilicus. What causes the pain I cannot say. It may be due to a catarrh of the stomach, dependent in some way on the rheumatic poison, or it may be in the abdominal muscles. I remember on two different occasions a case being sent into hospital as acute appendicitis for immediate operation. Operation was postponed and the patient put on large doses of salicylate of sodium. Within forty-eight hours all pain had ceased, the patient felt quite well, and some days afterwards left hospital without operation. Whether the symptoms were due to rheumatism which cleared up with the salicylates, or whether it really was appendicitis which disappeared on proper dieting, I cannot say, but in such cases it is well to have rheumatism in our minds. I am told that such cases as these are quite common amongst young soldiers when they first enlist.

Headache is another trouble in rheumatic children and also in the families of rheumatic parents. At present in this school I have several rheumatic boys, who constantly come to me with bad headaches. It may be due to the anæmia so common in these cases, or to nervous temperament which we also find, or it may be caused directly

by the rheumatic poison. It is a very common complaint in chorea.

Another symptom very noticeable in rheumatic children is the nervous temperament they exhibit, such children being subject to many minor nervous disorders, such as night terrors, habit spasm, over-sensitiveness, nervous diarrhoea, and in some cases eneuresis. Wasting is another common symptom, and it is often the only complaint for which some children are brought to the doctor, but on questioning one will very often get a vague history of growing pains.

It is astonishing how susceptible rheumatic children are to secondary anæmia. The red blood corpuscles of children are more readily destroyed than those of adults, and are only very slowly replaced, the red marrow not being capable of meeting these special losses. The consequence is a fall in the hæmoglobin percentage and in the number of red corpuscles. These changes are frequently seen in rheumatic children, and are of serious import. I have made it a routine in practice to put my rheumatic children on a tonic containing iron during the convalescent stage.

PROGNOSIS.

This disease in children must always be looked upon as a very serious complaint on account of the great tendency to heart trouble. This danger is aggravated on account of the first heart symptoms being likely to be overlooked or neglected, and also by the fact that at this period recurrent attacks are the rule, so that the heart may be fatally damaged in spite of every care. In all cases we must be careful to impress on the parents the seriousness of the malady and the importance of prolonged rest in bed in order, if possible, to save the heart. The first attack does not generally damage the heart permanently, and in many cases where a murmur is present, by prolonged rest and good treatment, it may disappear and the heart become healthy again so far as we are able to judge.

TREATMENT.

Our first duty is to try to prevent the disease developing in those who are by heredity predisposed to it. Such children must be well and warmly clothed, and must not be allowed to have wet feet. Many people forbid bathing of any kind, but my experience here is that sea-water baths, which have been slightly heated, do not do any harm during the summer months. The throat and nose must be carefully examined, and if in an unhealthy condition, must be attended to at once. On the first appearance of the so-called "growing pains" the child must be put to bed for a prolonged rest, it may be weeks or months, so as to save the heart if possible, kept warm, and put on anti-rheumatic remedies. The only drugs that seem to have much effect are salicylate of sodium, aspirin, salicin and potassium iodide. There is a diversity of opinion as to the usefulness of salicylates, some people believing that they are of use only in arthritic cases, and are useless or perhaps harmful in cardiac cases on account of their depressing effect ; but, in my opinion salicylate of sodium is our most useful drug in all cases of rheumatism. I cannot see that aspirin and salicin have anything to recommend them in preference to it. It is well to combine the salicylate with double the quantity of bicarbonate of sodium to prevent any toxic symptoms. I generally give 10 grains of salicylate of sodium with 20 grains of bicarbonate of sodium every three or four hours to a child of ten, and gradually diminish the frequency and quantity of the doses as the symptoms abate, watching carefully, of course, its effect. They should not be stopped as soon as pains cease or when the temperature becomes normal, but should be continued for about a fortnight after the pains have subsided, but in smaller doses. Potassium iodide in 2 to 5 grain doses is also useful in joint affections. Some practitioners give quinine combined with an alkali, such as citrate of sodium or potassium. There is no need for local applications for the joint or limb pains, except to wrap

the part up in cotton wool, and if the bedclothes press on it, use a cradle. The child should be kept in bed for at least three weeks after all pain has ceased, the heart being examined carefully every day. If there are any signs of pericarditis, leeches, ice over the præcordium, small blisters or iodine, are the remedies usually resorted to. If there is slight dilatation, but no symptoms of failing compensation, give small doses of *nux vomica*, but in cases of severe dilatation, where the heart is becoming slightly irregular, give either *tr. strophanthus* or *digitalis* combined with *nux vomica*, watching the effect carefully. I think it is well to avoid, as far as possible, hypodermic medication in cases of children. If there is much pain or discomfort with sleeplessness, a little Dover's powder or *nepenthe* may be given, but it must always be used with extreme caution. During convalescence give iron, cod liver oil and other tonics. Great care must also be exercised after the attack is over, as recurrences are frequent. On the first sign of any muscular or joint pain, sore throat or rise of temperature, the patient must go to bed again at once. A change to a dry climate—inland in preference to the seaside—should be recommended.

LITERARY INTELLIGENCE.

MESSRS. J. & A. CHURCHILL are about to publish an important new book entitled "The Difficulties and Emergencies of Obstetric Practice," by Mr. Comyns Berkeley and Mr. Victor Bonney, Obstetric and Gynæcological Surgeons to the Middlesex Hospital. The illustrations are all original and very numerous. They are, moreover, the design of an expert artist, who is himself a medical man. The same publishers have just ready the sixth edition of "A Short Practice of Midwifery," by Dr. Jellett, Master of the Rotunda Hospital, Dublin. The new edition is to be issued with a larger page, and has been revised throughout, and contains many new illustrations. The popularity of the book is evident by the fact that 20,000 copies have been printed.

PART II.

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

The Carrier Problem in Infectious Diseases. By J. C. G. LEDINGHAM, M.B., D.Sc., Chief Bacteriologist, Lister Institute of Preventive Medicine, London; and J. A. ARKWRIGHT, M.D., Assistant-Bacteriologist, Lister Institute of Preventive Medicine, London. London: Edward Arnold; New York: Longmans, Green & Co. 1912. Pp. vii + 319.

THIS is a most valuable addition to the series of International Medical Monographs which, under the able editorship of Leonard Hill and William Bulloch, are being issued on subjects of immediate medical interest. As is pointed out in the preface to this and companion volumes, the object of the series is to present from the pen of first hand authorities the present knowledge of their own subjects in a duly balanced, concise and accurate form. The subject of the present volume is essentially one on which a standard volume summarising critically the knowledge that has been gained to date is urgently required, and as far as we can judge the authors have done their work most excellently. The largest section in the book deals with the carrier problem in enteric fever; exhaustive chapters on the same problem in paratyphoid fever, in diphtheria, in epidemic cerebrospinal meningitis, in dysentery and in cholera, complete the work. We are glad to notice that as regards typhoid fever due credit is given to Horton-Smith for his early perspicacity in recognising the possible importance of typhoid carriers. The entire problem is discussed at length in all its bearings, and all literature of value in this connection is dealt with in its proper place. The facts detailed are beyond the criticism of a mere reviewer, who may, however, admire

the way in which the complex and varied details of the problem have been grouped together by the writers. So far but little advance in curing typhoid carriers can be chronicled, but the success attending the administration of Borovertin (a compound of urotropin and boric acid) in the case of urinary carriers is noteworthy.

The chapters on diphtheria and cerebrospinal meningitis are full of interest. In neither of these diseases is the chronic carrier met with in the same sense as in typhoid fever, but the problem of how to deal with persons who harbour the characteristic organism of these infections for two to three months after original infection is, nevertheless, a pressing one. Perhaps the most striking advance in connection with the more recent epidemic of cerebrospinal meningitis was the recognition of the pharyngeal mucosa as the primary habitat of the meningococcus. The proof of this and the discovery of the organism in apparently normal individuals is fully dealt with. Of less interest in this country are the chapters on dysentery and cholera, though in the facts detailed concerning the former disease we may find explanations of some anomalous symptoms met with at home in patients who have previously lived in countries where dysentery was prevalent.

We have much pleasure in cordially recommending this work as a scientific and up-to-date presentation of the carrier problem in disease.

Vaccine Therapy: Its Theory and Practice. By R. W. ALLEN, M.D., B.S. (Lond.); Late Clinical Pathologist to the Mount Vernon Hospital for Disease. Fourth Edition. London: H. K. Lewis. 1912. Pp. x + 444.

THIS book has now reached a fourth edition, and has long since justified its existence. We are sure it will be eagerly purchased, and we hope it will be widely read, for in days when the hypodermic syringe laden with a dose of more or less appropriate vaccine is in the hands of every practitioner it is advisable that some reference book on the

subject of vaccine therapy should be available, and that reliance should not be placed, for information merely, on the catalogues of medical firms. One of the lessons that this book urges is the necessity of ascertaining the true bacterial cause of any given disease, at any rate as nearly as possible, before pursuing it with a vaccine. Such a lesson is, of course, obvious, but it is one that is very often neglected, and now that vaccines for all sorts and conditions of disease are readily obtainable on the market, and are known to do little harm even if their beneficial results are not apparent, there is a grave danger not only to vaccine therapy itself, but also to scientific treatment in general from the indiscriminate and ill-judged employment of such agencies. It is now no unusual thing to meet with medical men who enthusiastically inform one that some trivial ailment has rapidly recovered after the use of some vaccine—an ailment which in nine cases out of ten would recover in just as short a time without any treatment whatsoever, or with some simpler, but no doubt more old-fashioned, treatment. The explanation of the way in which vaccines produce their effect has, moreover, impressed the public mind, much in the same way that Bulgarian milk did a few years ago, and in many cases vaccine treatment is demanded for conditions that obviously do not require it. In this way we believe that a school of qualified quackery is growing up, and we take this opportunity of raising our protest. We do not wish to be misunderstood. Vaccine therapy is most useful, and all honour to Sir Almroth Wright, its introducer ; but it must not be run as a cure-all which cannot fail, no matter what the disease against which the vaccine is employed.

To return now to the volume before us. It is in our opinion written in a most temperate and scientific spirit. The writer is undoubtedly enthusiastic, but still speaks with caution, and presents honestly the results of his own experience. Practically the whole field of vaccine therapy is covered, and both as a reference book in which the facts relating to the experience of vaccine treatment in any

given disease can be readily found, and as a volume for immediate perusal for the sake of gaining an up-to-date knowledge of vaccine therapy in all its branches, we cordially recommend it.

Studies in Clinical Medicine. By C. O. HAWTHORNE, M.D. London: John Bale, Sons & Danielsson, Ltd. 1912. Pp. viii + 441.

THIS little volume consists of a collection of papers and essays for the most part previously published in the various medical journals, and the author has earned our gratitude by placing a quantity of diverse information in such a convenient and compact form.

Though the range of subjects treated is fairly wide, comprising descriptions of special features of diseases affecting practically all the body "systems," two of these subjects receive special attention in a number of essays, and we think deservedly. One of these is rheumatism, particularly in its relation to rheumatoid arthritis. It is pointed out that most authorities regard the occurrence of subcutaneous fibrous nodules as infallible evidence of "rheumatism" in the strict, if somewhat indefinite, sense of the word. The writer brings forward evidence and cases to show that these nodules undoubtedly occur in cases of rheumatoid arthritis, the obvious inference being either that this disease is very closely allied to rheumatism or that the general view with regard to the nodules is mistaken. Unfortunately, "it is not the ambition of this essay to suggest which alternative should be selected."

The other topic which receives considerable space is the ophthalmoscopic findings in various general diseases. It is to be feared that many physicians give this aspect of diagnosis less attention than the results would warrant not, of course, through ignorance of its importance, but probably because they have not themselves practised the use of the instrument, and examination by a "specialist" involves inconvenient delay or expense. A perusal of some of these essays leaves one with a firm determination

to correct the omission, and to carry the ophthalmoscope in the other pocket.

The most readable part of the book, however, is undoubtedly the dozen or so of clinical lectures given towards the end. These are, in our opinion, as good as any we remember reading, and better than most. They are eminently clear, logical and scientific, but read with the ease and interest of a novel.

The book is scarcely one for reference, though a good index is provided; but for spare moments at the study fire we can cordially recommend it as most profitable and entertaining.

Achondroplasia : Its Nature and its Cause. By Dr. MURK JANSSEN, Lecturer on Orthopædic Surgery, University of Leiden. Leiden : E. J. Brill, Ltd.; London : Baillière, Tindall & Cox. 1912. Demy Quarto. Pp. vi + 98.

DOCTOR JANSSEN has given us a most interesting monograph upon an intensely interesting subject. Yet we feel that probably but few of his readers will accept his main contention that an abnormal amniotic pressure affords the explanation for all the main features to be observed in typical cases of achondroplasia. Put as shortly as possible, he believes that abnormal pressure within the amniotic sac of the developing embryo leads to a diminished blood supply of the cartilages at a time when these latter are increasing in volume more rapidly than the other tissues of the embryo. In this way the growth of the cartilaginous skeleton is stunted, and the later formed cartilages, as for instance those of the limbs, are most affected. In a most interesting manner Dr. Jansen seeks to explain each of the peculiarities of the typical achondroplastic, and to show that each may have its origin from such an increased amniotic pressure as he postulates. At the same time he freely admits that the non-characteristic symptoms cannot with certainty be included among the consequences direct or indirect of such pressure, and the probable

influence of diminished pituitary secretion is clearly indicated.

The observed facts upon which Dr. Jansen bases his hypothesis are set out most lucidly, and at all times the argument can be most easily followed, yet we feel that the condition is too complex for so mechanical an explanation.

In spite of his warm advocacy we are not convinced that "the achondroplastic is an amnion dwarf, folded up by a dwarf amnion, by the enhanced hydrostatic pressure of which it has been disturbed in the development of its skeleton," and that "the wonders . . . of achondroplasia may be easily understood and arranged in chronological order, if we accept the principle that amnion pressure is able to disturb the nutrition and growth of part of the embryo, whilst the non-affected parts continue their growth."

The monograph is attractively brought out, well printed, and fully illustrated.

A Text-book on the Practice of Gynæcology for Practitioners and Students. By WILLIAM EASTERLY ASHTON, M.D., LL.D., Fellow of the American Gynæcological Society; formerly Lecturer on Gynæcology in the Jefferson Medical College, Philadelphia; one of the Founders of the Congrès International de Gynécologie et d'Obstétrique, &c. With 1,050 New Line Drawings illustrating the Text by JOHN V. ALTENEDER. Fifth Edition, thoroughly revised. Philadelphia and London: W. B. Saunders Company. 1912. Royal 8vo. Pp. 1,100.

THIS work is noted for the amount of information it concerns—indeed in this respect it is encyclopædic, and also in the number of its illustrations, which, though somewhat diagrammatic, are none the less valuable. The fifth edition has been thoroughly revised, both in the ætiology, pathology, and treatment of different gynæcological diseases, and in the description of new operations. The chapter on the blood in relation to surgery has been

considerably changed, and made to conform with recent advances in hæmatology. The chapter on the *x*-rays has been enlarged, and their use in the treatment of fibroid tumours has been discussed, as also in cases of obstinate metrorrhagia and menorrhagia. The palliative treatment of cancer of the uterus and vagina receives additional attention. Recent advances in the diagnosis and treatment of syphilis have been carefully considered.

A curious Americanism is to be noted in places. Thus, a glass irrigating jar with a rubber tube ending in a catheter is described as "Ashton's apparatus for hydrostatic dilatation of the bladder," and further on the same apparatus with a glass nozzle instead of a catheter is described as "Ashton's general irrigation apparatus." It seems a simple way of becoming an inventor.

A Clinical Manual of the Malformations and Congenital Diseases of the Fœtus. By PROFESSOR DR. R. BIRNBAUM, Chief Physician to the University Clinic for Women at Göttingen. Translated and Annotated by G. BLACKER, M.D., B.S., F.R.C.P., F.R.C.S., Obstetric Physician to University College Hospital, and the Great Northern Central Hospital; Teacher of Practical Midwifery at University College Hospital Medical School, &c. With 58 Illustrations in the Text, and eight Plates. London: J. & A. Churchill. 1912. Royal 8vo. Pp. xiv + 379.

THIS work is perhaps the first, or one of the first, of its scope to appear in English, and it is was this fact that mainly lead Dr. Blacker to translate it. The author endeavours to treat his subject from the anatomical, pathological, physiological, and clinical standpoints, and succeeds in producing a most valuable work of reference.

Amongst the headings of the different chapters are found the following:—Arrest of development of the whole embryonic rudiment; defective formation of the skull-cap; hydrocephalus; malformations of the face; malformations of the neck; umbilical hernia; malformations of

the genital organs ; double malformations ; the legal rights of monsters.

The book deals as clearly as is possible at the present time with a most difficult subject, and constitutes a valuable work of reference.

Obstetrics. A Text-book for the use of Students and Practitioners. By J. WHITRIDGE WILLIAMS, Professor of Obstetrics, Johns Hopkins University ; Obstetrician-in-Chief to the Johns Hopkins Hospital ; Gynæcologist to the Union Protestant Infirmary, Baltimore, M.D. Third, enlarged and revised, Edition. With Sixteen Plates and Sixty-eight Illustrations in the Text. New York and London : D. Appleton & Co. 1912. Royal 8vo. Pp. xxx + 997.

OBSTETRICIANS generally will extend a very warm welcome to the new edition of Professor Whitridge Williams' work on Obstetrics. The book has been very carefully revised throughout, and in some places important changes have been made. These changes are particularly to be found in the chapters on development of the ovum, the organic changes incident to pregnancy, pubiotomy, Cæsarean section, pernicious vomiting, and the treatment of contracted pelvis. The bibliographical references at the end of each chapter have also been brought up to date.

Professor Williams' views on the ætiology of pernicious vomiting have always been received with attention, though they may not always be accepted. He emphasises them with great clearness in the present edition, and ends by stating that there is abundant evidence to prove that certain cases of pernicious vomiting are due to a toxæmia, which is associated with a high ammonia coefficient, a marked reduction in the output of urea, and profound degenerative lesions in the liver and kidney. He further considers that the liver lesions are in the nature of a degeneration or necrosis effecting the central portions of the lobules, whilst in eclampsia the process is essentially one of thrombosis starting in the peri-portal spaces ; and

he states that he considers the two diseases have only two points in common, namely, that both occur in pregnant women and that both are manifestations of disturbed metabolism.

Professor Williams is equally interesting and instructive when he comes to discuss the ætiology of eclampsia, but his treatment is disappointing. So far the lowest mortality rates in a considerable series of cases have been obtained by Professor Stroganoff and at the Rotunda Hospital. Professor Williams' criticism of Stroganoff's treatment is that with one exception no one seems to have taken it seriously, and he does not even mention the treatment originated by Dr. Tweedy at the Rotunda Hospital. At the same time he places the mortality of eclampsia at between 20 and 25 per cent., and this is very considerably above the mortality amongst the cases treated by Stroganoff or at the Rotunda Hospital.

We cannot speak too highly of Professor Williams' work, which is in all ways a model of what a modern work on midwifery should be.

Hoblyn's Dictionary of Terms used in Medicine and the Collateral Sciences. Fifteenth Edition. Revised throughout, with numerous additions. By JOHN A. P. PRICE, B.A., M.D. Oxon., M.B. Lond., Surgeon to the Royal Berks Hospital; late Physician to the Royal Hospital for Children and Women. London: G. Bell & Sons, Ltd. 1912. Cr. 8vo. Pp. x + 878.

It is our pleasant duty to draw attention to the recent publication of the fifteenth edition of this deservedly popular Medical Dictionary. The Editor has paid us the compliment of making some corrections which we suggested when reviewing the fourteenth edition in a friendly spirit some three years ago—in March, 1910.

The scientific standing of the work has been very much raised since Dr. Price took in hand the revision of its pages. He has paid special attention to terms used in bacteriology, and in a brief preface acknowledges his indebtedness in

this department to Muir and Ritchie's classical work on the subject. "Anaphylaxis" is defined in the very words of these authors.

Why does Dr. Price still countenance such mis-spellings as "Anchylosis" and "Anchylostoma," which, as he actually points out, are wrong. Under the former, he writes: "This term should be spelled *ankylosis*: the Greek letter is κ not χ ."

Under "Angina" he correctly states that "the 'i' is short," but in referring to the root *ang* or *anc*, he omits any mention of the Greek words $\alpha\gamma\chi\omega$, to press tight, strangle, throttle, and $\alpha\gamma\chi\acute{o}\nu\eta$, a throttling or strangling. This latter word with its short *omicron* should settle the question of *angina*.

RECENT WORKS ON DISEASES OF CHILDREN.

1. *The Medical Diseases of Children*. By T. R. C. WHIPHAM, M.A., M.D. (Oxon), M.R.C.P.; Physician to Evelina Hospital for Sick Children. London: University Press (Hodder & Stoughton & Henry Frowde). 1912. Demy 8vo. Pp. xi + 417.

2. *The Nutrition of the Infant*. By RALPH VINCENT, M.D. Fourth Edition. London: Baillière, Tindall & Cox. 1913. Demy 8vo. Pp. xviii + 343.

1. THE chief defect in Dr. Whipham's work is its great resemblance to many other books on the same subject. The general form of the book leaves nothing to be desired. It is readable, concise, well illustrated, and includes practically all the pathological conditions of a non-surgical nature that the student or general practitioner is likely to come across. But one looks in vain for any new theory or even new form of treatment to justify its existence, or at any rate to raise it above the level of so many similar works.

If pædiatrics is to advance in this country, it is time that men of such wide experience, and with such opportunities for observation and research as the authors of

these small text-books shall confine themselves to monographs on special diseases, of which they have made special study. These would then afford valuable material for the larger text-books.

2. IN the fourth edition of this valuable work—which is the best exposition of the “percentage method” published in England—Dr. Vincent still carries on sturdily his crusade against all pasteurisation and sterilisation of milk. His description of the methods of cooling and preparing the milk for the Infants’ Hospital were always interesting, but the present edition of his book has been rendered much more valuable by the addition of an excellent chapter on the bacteriology of milk. This chapter is the result of wide original research on the part of the author, and whether one agrees with his conclusions or not, may be read with profit practically as a monograph on this subject. Its value is also enhanced by a series of most excellent micro-photographs. A great deal of new work has been added to the chapters on intestinal disorders, and lastly, a valuable addition to the book from the practical point of view is the description of the “fat whey” method, which has proved successful in cases treated at home where “percentage” milk was not obtainable.

A Text-book of Obstetrics. By BARTON COOKE HIRST, M.D., Professor of Obstetrics in the University of Pennsylvania; Gynæcologist to the Howard, the Orthopædic, and the Philadelphia Hospitals, &c. Seventh Edition, revised and enlarged. With 895 Illustrations, 53 of them in Colours. Philadelphia and London: W. B. Saunders Company. 1912. 8vo. Pp. 1013.

DR. BARTON HIRST’S well-known work on Midwifery has reached a seventh edition. In it the book has been thoroughly revised and rearranged, the order of the chapters now being—as the author admits—much more

logical. In the previous edition a description of the common gynæcological operations was introduced, and this innovation has been continued. In addition there is an extension of the article on Diseases of the Breast.

Dr. Hirst's work is so generally known that it does not call for an extended review, and we need only say that the present edition fully maintains the high reputation of its predecessors.

Pye's Surgical Handicraft. A Manual of Surgical Manipulations, Minor Surgery, and other Matters connected with the Work of House Surgeons and Surgical Dressers. Edited and largely rewritten by W. H. CLAYTON-GREENE, B.A., M.B., B.C. (Cantab.), F.R.C.S. (Eng.); Surgeon to St. Mary's Hospital; Lecturer on Surgery in the Medical School, &c. Sixth Edition. Bristol: John Wright & Sons. 1912. Demy 8vo. Pp. xvi + 595.

THIS book is all that it professes to be, it is in fact a very full treatise on all ordinary surgical treatment apart from actual operation. The matter is arranged in an orderly manner, making it easy to look up any particular subject with rapidity. The directions given are all sound and the language used is clear. All through the book will be found useful practical hints. The chapters on "The Arrest of Hæmorrhage" and "Emergencies, Surgical and General" will well repay careful reading. In short, we can thoroughly recommend the book to all students and qualified men who wish to learn surgical handicraft.

A Text-book of Gynæcology. By WILLIAM S. GARDNER, M.D.; Professor of Gynæcology in Baltimore. New York and London: Appleton & Co. 1912. Demy 8vo. Pp. 286. With 138 Illustrations.

THIS is a short, clearly written book for students only. It contains the essential facts relating to common gynæ-

cological conditions, and rare conditions are touched on very lightly. Its teaching, so far as it goes, appears to us to represent correctly modern views, and the majority of the illustrations, though they are not artistic, show what they are intended to show. There are a number of what the author calls "photomicrographs," but as they are not very clear their value is not very evident. On the whole, we are rather inclined to regard the work as somewhat in the nature of a "cram-book."

London Medical Publications. The Diseases of the Skin.

By WILLMOTT EVANS, M.D., F.R.C.S.; Senior Surgeon to the Hospital for Diseases of the Skin, Blackfriars. With Thirty-two Illustrations. London: University of London Press. 1912. Pp. xiv + 375.

THE writer states in his Preface to this book that the reason so many students and practitioners fail to obtain a satisfactory knowledge of dermatology is that the many excellent standard treatises on the subject are too advanced for those who are entering on the study. In consequence the descriptions in this book have been written in as simple a style as is compatible with correctness. From this abstract from the Preface it is possible to understand the type of book that may be expected, and we may say at once both that we are in agreement with the writer's views concerning the difficulty of the subject as viewed by the student in the average text-book and that in our opinion he has admirably fulfilled his object in writing an easy and non-repellent work on skin diseases. We only regret that the work could not have been illustrated by coloured plates throughout, as non-coloured illustrations convey a very poor idea of skin affections, more especially to a student who has seen very few skin cases.

No special comment is required on the text. It is, as already stated, clear and succinct, and above all unburdened with a multitude of unnecessary names. A sufficient number of good every-day prescriptions are included. The print—an important point—is of rather large type, and

thereby still further removes the impression of difficulty so frequently produced by the pages of the learned but wearisome pages of more ambitious works.

WORKS ON BIOCHEMISTRY.

1. *The Simple Carbohydrates and the Glucosides.* By E. FRANKLAND ARMSTRONG, D.Sc., Ph.D. Second Edition. London : Longmans, Green & Co. 1912. Royal 8vo. Pp. viii+171.
2. *The Physiology of Protein Metabolism.* By E. P. CATHCART, M.D., D.Sc. London : Longmans, Green & Co. 1912. Royal 8vo. Pp. viii+142.
3. *The Protein Element in Nutrition.* By MAJOR D. M'CAY, M.B., B.C.h., B.A.O., M.R.C.P., I.M.S. London : Edward Arnold. 1912. Demy 8vo. Pp. xv.+216.
4. *Oxidations and Reductions in the Animal Body.* By H. D. DAKIN, D.Sc., F.I.C. London : Longmans, Green & Co. 1912. Royal 8vo. Pp. viii+135.
5. *Lead Poisoning and Lead Absorption.* By THOMAS M. LEGGE, M.D., and KENNETH W. GOADBY, M.R.C.S. London : Edward Arnold. 1912. Demy 8vo. Pp. xi+308.

1. IN this Journal for November, 1911, the first edition of Dr. Armstrong's important monograph was somewhat fully noticed, and it is a matter for congratulation that a second edition has been so soon called for. The principal changes in the new edition are these :—

Chapter I., on the nature of glucose, has been considerably modified and expanded, and the rarer carbohydrates are more fully noticed, especially in their relation to enzymes. The chapter on the glucosides has been materially enlarged, and a new chapter dealing with the significance of the carbohydrates in plant physiology has been added. These problems are, as the author remarks, among the most fascinating of those now under investigation, and their study must surely widen our conceptions of vital change.

A long outstanding puzzle is the chemical nature of the tannins, which are usually regarded as glucosides. Fischer and Freudenberg have now furnished almost complete proof that tannin is an acyl-derivative of glucose, with the high molecular weight of 1,700, and they have succeeded in producing a synthetic compound from glucose which has all the properties of the tannins.

2. MORE work has perhaps been done upon the digestion and assimilation of proteins than upon any of the other branches of metabolism, and in the present monograph Dr. Cathcart discusses the more important results published during the last decade, and their bearing upon the work of the earlier investigators.

The contents are distributed under nine chapters—viz., digestion and absorption of proteins ; protein regeneration ; feeding experiments with abiuret products of digestion ; desaminisation ; influence of the food on the composition of the tissues ; protein requirements ; theories of protein metabolism ; starvation ; and work.

The problem of the metabolism of protein is one of the most complex and obscure in physiology, and it is somewhat discouraging to read that Carl Voit, after forty years of strenuous work in this field, could only come to the lame conclusion that "the unknown causes of metabolism are found in the cells of the organism." A cynic might well say : What a small mouse the mountain has brought forth.

Despite this scanty knowledge, physiologists still persist in the arduous quest, and Dr. Cathcart's monograph sums up concisely and clearly the results of a vast number of laborious investigations.

A fundamental question is that of the minimum amount of protein required daily by the body, and this is a matter not merely of scientific, but also of economic, importance.

Suffice it here to say that Chittenden's interesting experiments which led him to conclude that most people take far too much protein food, and that they would do better and live more healthily on a much smaller quantum

have been trenchantly criticised, and cannot be considered as having been incontestably established. They are more fully referred to in the next review.

3. THIS book is an important contribution to a subject of fundamental import—viz., the amount of protein food required for nutrition.

The author is Professor of Physiology, Medical College, Calcutta, and he has fully utilised in his investigations the splendid opportunities afforded by a critical study of the prison dietaries of India.

He adduces a powerful body of evidence which appears to prove that a high protein ratio is necessary in child life in order to evolve a virile and active race of men. His final conclusions are in opposition to the stinted diet advocated by Chittenden, and M'Cay's meritorious work deserves, and doubtless will receive, the closest attention from all who have to deal with dietaries for the young in schools and institutions.

The literary style of the book is attractive, and Dr. M'Cay manages to instil life into the dry bones of statistics and food tables, and his sane and temperate conclusions inspire confidence.

The author takes a broad view of the problems of nutrition, and shows himself to be thoroughly conversant with the enormous and scattered literature of the subject.

A pleasing feature of the book is the selection of excellent photographs of various types of the natives of India, illustrating the *physique* of the different tribes and races investigated.

It is interesting to note that in his earlier days M'Cay was a believer in the validity of Chittenden's brilliant work. He recognises that Chittenden was the first to show that man can live and do a certain amount of work upon an intake of protein much below the ordinary accepted standards without increasing—indeed with a considerable diminution of—the fuel value of the diet. It was not until evidence that appears absolutely convincing had been accumulated that M'Cay unwillingly

resigned his belief in Chittenden's deductions, and has become a firm believer in a doctrine diametrically opposed to these.

We heartily commend this book to the serious attention of our readers, and will conclude our notice of it by a quotation which summarises Dr. M'Cay's views upon tropical dietary (p. 206) :—

“ We may conclude this study of the effects of the level of protein metabolism on the physique and general efficiency of different tropical tribes and races by stating that the facts afford ample proof of the all-important influence exerted by food, and particularly protein, in determining the degree of muscular development, the general physical endowment, the powers of endurance, resistance to disease, and, most important of all, the place a tribe or race has won for itself in manliness, courage, and soldierly instincts. We have no hesitation in saying that, among the tribes and races contrasted, the higher the level of protein interchange the more robust and energetic and the more manly the race.”

4. DR. DAKIN has done much original work in the investigation of the processes of oxidation in the animal body, and is, therefore, well equipped to write such a summary as that under review.

The book aims to give an account of the principal chemical reactions involving oxidation or reduction which are known to take place in animal organisms, and it cannot be overlooked by those who are interested in the problems of metabolism.

Our views as to the graduated processes of oxidation were, up to a few years, very limited in scope. But Dr. Dakin points out that the bald statements that fats and sugars are oxidised in the body to carbon dioxide and water, while proteins yield urea in addition, are no longer considered all-sufficient explanations of the chemical rôle of these substances in the animal economy.

It is very important to observe that many of the striking biochemical oxidations of the living cell may be

imitated more or less satisfactorily by experiments *in vitro*, and there is no evidence that suggests that the oxidative processes of the living organism differ in any fundamental way from chemical oxidations known to take place in inanimate nature.

The greater part of the book is devoted to the problems connected with oxidation of organic acids, and Chapter IV., on the carbohydrates, shows how meagre is our knowledge of the intermediate products of metabolism in this physiologically important class of substances.

The one definite statement that emerges from the discussion of carbohydrates is simply this (p. 85) :—" Lactic acid must therefore be regarded as one of the most important substances concerned with the intermediate metabolism of the carbohydrates. Unfortunately, we know nothing definite about the intermediate steps of the conversion in the animal body of glucose into lactic acid."

5. The joint authors of this book hold the D.P.H. Cantab., and they severally occupy positions, administrative and experimental, which yield them ample opportunities for an intimate knowledge of the industrial uses of lead, and of the preventive measures to be adopted against lead poisoning.

Hence the book is certain to be a valuable help to certifying factory surgeons, to medical officers of works concerned in any way with lead compounds, and, indeed, it should be welcomed by all medical men who take an intelligent interest in proceedings under the Workmen's Compensation Act.

The subject is very fully discussed under the headings, chiefly, of ætiology, susceptibility, pathology, diagnosis, chemistry, preventive measures, and the various processes employed in different trades.

Upon all these points a large mass of valuable information is supplied, and it is needless to go into details.

Where there is so much that is good and useful in the book it is a pity that it is marred by some blemishes which

could easily have been avoided and which ought not to have been made.

We refer especially to slipshod English, and to inaccurate, nay, absurd chemical statements.

For example, p. 3 :—

“Chemically speaking, lead is a tetrad, and forms a number of organic derivatives, especially through the intervention of a particular oxide, minium. Lead forms *metallic alkalies and alkaline earths* (*sic!*) resembling silver in this direction, and also metallic compounds with zinc and copper; in this point it is very similar to silver.”

What on earth is the meaning of this extraordinary sentence, which would serve as a test for parsing to be set before school children? In nearly all the important plumbic compounds lead functions as a dyad.

Again (p. 3) :—

“A number of oxides of the metal are known: two varieties of protoxides (mascicot (*sic!*) and litharge, protoxide hydrate and bioxide.”

Compare this muddle with the concise statement in Newth's “Inorganic Chemistry,” 10th Edition, p. 647 :—

“Five oxides of lead are known, having the composition Pb_2O , PbO , Pb_2O_3 , Pb_3O_4 , PbO_2 .”

Or, again (p. 4) :—

“In dilute solutions this sulphide is, however, appreciably soluble in mineral acids, and may introduce errors in analysis, especially as the solubility is distinctly increased by the presence of certain *earthy* salts” (*sic!*).

Once more (p. 5) :—

“It is possible to determine the presence of lead in a large volume without evaporating down the whole bulk of fluid. By this means liquid containing lead is treated with sulphide of copper, sulphide of mercury, or baryta water.”

Neither the reviewer nor some of his expert chemical friends can make head or tail of this statement, and we need not give further examples of laxity of thought or carelessness of language.

The book is likely to command a ready sale, and these minor defects can readily be corrected in the next edition.

In addition to figures illustrative of industrial processes, and of preventive measures concerned with lead, there are four excellent full-page plates, three of which are microphotographs of pathological changes in the animal tissues induced by lead.

The chief point brought out in the histological examination of the various organs is the occurrence of minute capillary hæmorrhages—*e.g.*, in the intestine, lung, kidney, and nervous tissues. This phenomenon is not peculiar to lead poisoning, but has also been observed in connection with other heavy metals—*e.g.*, Bi, Hg, Fe, and Ni.

Immunity, Methods of Diagnosis and Therapy and their Practical Application. By DR. JULIUS CITRON, Assistant at the University Clinic of Berlin. Translated and Edited by A. L. GARBAT, M.D., Assistant Pathologist, German Hospital, N. Y. Philadelphia : P. Blakeston's Son & Co. 1912. Royal 8vo. Pp. xiii. + 208.

THIS little book has an attractive title, and covers in its 208 pages an enormous amount of ground. Beginning with definitions of immunity and antibody, and the law of specificity, Dr. Citron takes the reader through the various methods based upon these hypotheses, and used in the Berlin Clinic for diagnostic, therapeutic, and prophylactic purposes.

There are, moreover, included "certain fundamental considerations of questions on immunity which for the present are only of theoretical interest, but which owing to the rapid development of the subject may soon become of practical importance."

As the Editor points out, this work is not intended as a text-book, but as a practical handbook, and will have its greatest interest for those actually engaged in this branch of research.

The principles underlying Dr. Citron's work are admir-

able. His insistence on the necessity for "controls" at every step is thoroughly sound, and he has some commendable observations on the "one job" specialist.

The chapters on Aggressins, on the History and Development of Tuberculins, and on the Cytolysins are of peculiar interest. The author is a cautious advocate of tuberculin given subcutaneously as a diagnostic in *selected cases*, and employs large and increasing doses for treatment.

In the chapters on cytolysins and "Complement Fixation" he is at his best. This part of the subject he studied with Wassermann himself, and he gives one a new idea of the wide application and exquisite delicacy of this method of investigation. It is characteristic of the race that the purity of the ingredients in the national food should be established day by day by a "Wassermann reaction."

It is, however, just in these chapters that the defects of the work are most apparent. The book has clearly suffered by translation, and so even when the meaning is not altogether lost in unintelligible English, it is too often obscured by mere verbosity.

We are gradually becoming accustomed to American spelling, but the advantage of the word "hemoptysis" over the more usual form is not obvious.

It is irritating, too, to find, after wading through a page of figures illustrative of some experiment, that the substance in question has been standardised in milligrammes, but administered in cc.s.

The idea of the book is good, but it attempts too much, and would be improved by being largely rewritten. It is clearly printed, well illustrated, and has a good index.

Manual of Medicine. By A. D. WOODWARK, M.D., M.R.C.P. Edinburgh, Glasgow and London: Henry Frowde and Hodder & Stoughton. 1912. Cr. 8vo. Pp. xi + 409.

THIS work is another of the small text-books on medicine that are now so plentiful. Like the majority of these, its

excuse for existence is that of “supplying a *vade-mecum* for the student clerking in the wards and a convenient reference for the busy practitioner.”

Dr. Woodwark's book is no better and no worse than the greater number of these colourless manuals. Its information is accurate and generally well selected, but there is a rather confusing system of tabulation and sub-tabulation, that renders it hard for the “busy practitioner” of the preface to put his hurried finger on the spot he seeks.

The author advances two claims to originality. One is that the articles on infective fevers are arranged in alphabetical order—a point which seems to us of not much importance one way or the other, as the index has to be used to find out where the whole section on fevers is.

The second is a chapter on insanity, which is sound and useful, and certainly worth its place in the book.

The book would be very useful if there were not a dozen others like it; as it is, there seems to be no very definite reason for its production.

The Treatment of Infantile Paralysis. By OSKAR VALPIUS, M.D.; Professor Extraordinary at the University of Heidelberg. Translated by ALAN H. TODD, M.B., B.S., B.Sc. (Lond.); House Surgeon, Guy's Hospital; late Resident Surgical Officer, Royal National Orthopædic Hospital. With Introduction by J. JACKSON CLARKE, M.B. (Lond.), F.R.C.S. London: Baillière, Tindall & Cox. 1912. Royal 8vo. Pp. x + 318.

“*The Treatment of Infantile Paralysis*” is an excellent English version of Oskar Valpius's valuable monograph by Alan H. Todd, who himself has had experience of orthopædic work.

The work is conveniently divided into two parts, preceded by some thirty pages of introduction.

The Introduction deals with the symptomology and course of anterior poliomyelitis, its ætiology and pathological anatomy. Lucid and very instructive, it contains

the deductions to be drawn from the histories of a number of epidemics, which occurred mostly on the Continent.

Part I. discusses the general treatment of paralysis, both in the early and late stages. The chapter on orthopædic apparatus enters into sufficient technical details to enable the reader to grasp the principles of the appliances, and the uses of their various parts. In the section on "The Surgery of Paralysis," the writer goes very fully, and with the knowledge and acumen gained by his large experience, into—(a) the treatment of paralytic contractions and deformities, and (b) the means which are employed for restoration of function. Under (a) Wrenching, Tendon Lengthening, and Tenotomy are considered; while (b) deals in an exhaustive yet concise manner with the methods, indications and results to be expected from Muscle Transplantation, Arthrodesis, Tendon Shortening and Tendon Transplantation, and Nerve Transplantation. In connection with the last the Professor introduces Dr. Stoffel's recent work on the internal anatomy of the nerve trunks, notably of the median nerve. The appreciation of Dr. Stoffel's researches raises nerve-grafting from a rather empirical to a more scientific and accurate procedure, by which greater success is ensured. The author's advice on the choice of methods is sound and in accordance with the views of most surgeons, who have to consider not only the time element, but also the expense and special after-treatment each case requires.

Part II., "Special," deals systematically with the paralysis of the various regions. It is remarkable for its wealth of clinical observation vividly recorded, both in the text and by the illustrations, which are numerous and carefully selected. Valpius devotes most space to the surgery of the shoulder-joint, as the literature on this subject is somewhat scanty. He reports twelve of his own cases in which he performed arthrodesis, and four where nerve transplantation was the treatment. His results for the most part were very satisfactory. The notes of his patients, and those recorded by other authorities, which we find throughout Part II., form a valuable

asset of the work, especially when supplemented by the practical and useful information which the author, with his discriminating judgement, knows so well how to impart.

In conclusion, Professor Valpius's work will appeal to the medical profession in general, and to the orthopædic surgeon in particular, as an up-to-date, thorough, and yet succinct treatise on the treatment of infantile paralysis, and we are indebted to Dr. Todd for his excellent translation.

RECENT WORKS ON SURGERY.

1. *Deformities, including Diseases of the Bones and Joints.* A Text-book of Orthopædic Surgery. By A. H. TUBBY, M.S. Lond., F.R.C.S. Eng.; Surgeon to, and in charge of, the Orthopædic Department, Westminster Hospital, and Lecturer on Clinical and Orthopædic Surgery in the Medical School; Surgeon to the Royal National Orthopædic Hospital; Consulting Surgeon to the Evelina Hospital for Sick Children, to Christ's Hospital and to the Seven Oaks Hospital for Hip Disease; Corresponding Member, American Orthopædic Association. Second Edition. Illustrated by 70 Plates and over 1,000 Figures, of which nearly 400 are original, and by Notes of 54 Cases. In two volumes. Macmillan & Co., Ltd. 1912.
2. *A Manual of Surgical Treatment.* By SIR W. WATSON CHEYNE, Bart., C.B., D.Sc., LL.D., F.R.C.S., F.R.S., Hon. Surgeon-in-Ordinary to H. M. The King, Senior Surgeon to King's College Hospital; and F. F. BURGHARD, M.S. (Lond.), F.R.C.S., Surgeon to King's College Hospital and Senior Surgeon to the Children's Hospital, Paddington Green. New Edition. Entirely revised and largely rewritten with the assistance of T. P. LEGG, M.S. (Lond.), F.R.C.S., Surgeon to the Royal Free Hospital, Assistant Surgeon to King's College Hospital; and ARTHUR EDMUNDS, M.S. (Lond.), F.R.C.S., Surgeon to the Great Northern Central

Hospital, Surgeon to Out-Patients the Children's Hospital, Paddington Green. In five volumes. Vols. II. and III. Longmans, Green & Co. 1912. Royal 8vo.

3. *A System of Surgery*. Edited by C. C. CHOYCE, B.Sc., M.D., F.R.C.S.; Dean of, and Teacher of Operative Surgery in, the London School of Clinical Medicine (Post-Graduate); Surgeon to the Seamen's Hospital, Greenwich; Surgeon to Out-Patients at the Great Northern Central Hospital. Pathological Editor—J. MARTIN BEATTIE, M.A., M.D., C.M.; Professor of Bacteriology in the University of Liverpool and Bacteriologist to the City of Liverpool; formerly Professor of Pathology and Bacteriology, and Dean of the Faculty of Medicine, in the University of Sheffield; Honorary Pathologist to the Sheffield Royal Infirmary and Royal Hospital. In three volumes. Vol. II., with 18 Coloured Plates, 8 Black and White Plates and 375 Illustrations in the text. Cassell & Co., Ltd. 1912. Pp. xii + 1105.

1. IN the sixteen years which have elapsed since the publication of the first edition of this work much has been added to our knowledge of this subject, and in the volumes before us the author has rightly included diseases of the bones and joints.

Volume I. is divided into sections, the first of which consists of some 300 pages devoted to a consideration of deformities of congenital origin. These include congenital deformities of the trunk, torticollis, congenital deformities of the limbs, congenital dislocations of the lower jaw and upper and lower extremities. Chapters five and six consist of over 80 pages, and are devoted to congenital dislocation of the hip. The last three chapters of this section are devoted to a consideration of club-foot.

In section II. of this volume will be found a description of non-congenital affections of the wrist and hand, some acquired affections of the legs and feet, and the various forms of acquired club-foot.

In section III. are included no less than sixteen chapters

on "static deformities," while the last section (IV.) is devoted to affections of muscles, tendons, bursæ and fasciæ.

Volume II., almost similar in size, consists of six sections, in which are described such conditions as tuberculous disease of bones and joints, infective diseases of bones and joints, rickets and its deformities, arthritis and spondylitis deformans, other affections of bones and joints and paralytic deformities.

Four appendices complete this volume, in the first of which will be found an abstract of the final report of the Béraneck's Royal Commission on Tuberculosis, in the second tuberculin and its methods of application, in the third a description of a new apparatus for the treatment of spinal tuberculosis and the treatment of tuberculous abscess of bony origin by aspiration and injection. In Appendix IV. Förster's operation for spastic paralysis is described.

The two volumes before us form the most complete and authoritative work on this subject in the English language. This edition is really a new work. The illustrations are numerous and well reproduced. Each section has a most complete bibliography and the volumes are well indexed. The work is one which no general or orthopædic surgeon can afford to be without. We heartily congratulate the author upon the production of a work which is a credit to British surgery.

2. VOLUME II. of Sir Watson Cheyne's well-known manual consists of almost 600 pages and corresponds with the greater part of Volume II. and all Volume III. of the first edition. Like the first volume of this new edition the subject-matter has received careful revision and in places has been largely rewritten. In the section devoted to the surgery of blood-vessels the principles of arteriorrhaphy are described and illustrated, and the application of this principle of arterial suture to the treatment of aneurysm, as introduced by Matas, is fully detailed. The treatment of fractures, both simple and compound, is practical and brought well up to date. The advice upon *x-ray* photography, and more especially by the stereoscopic method,

as an aid to deciding upon whether the treatment should be operative or non-operative is sound.

Volume III. is about similar in size to Volume II., and corresponds to Volume IV. and almost half of Volume V. of the former edition. Every chapter exhibits the same evidences of careful revision as the first and second volumes. The surgery of the joints represents well over one-third of the book and leaves nothing to be desired. The surgery of the spine is very concise and might perhaps with advantage have been amplified. The surgical affections of the head and face are more fully described and well illustrated—many of the illustrations being new.

We can cordially and confidently recommend this new edition to every surgeon as an authoritative and reliable practical work.

3. THIS volume opens with a magnificent monograph from the pen of Mr. W. Sampson Handley on the breast. Mr. Handley's work in connection with the spread of breast cancer by lymphatic permeation is so well-known that it is unnecessary for us to say more of the manner in which he has treated this subject than that it is quite up to the standard his previous work has led us to expect. The chapters on the face, lips and palate, and on the tongue are excellent. The section devoted to the stomach and duodenum, by Mr. James Sherrin, is very sound and practical as far as it goes. Other good sections are those on the intestines, by Mr. Alexander Miles; the appendix, by Mr. Percy Sargent, who is also responsible for the peritoneum; hernia, by Mr. Laurie M'Gavin, who seems very partial to the use of filigree for the performance of radical cures. The section on the rectum and anal canal is written by Mr. H. S. Clogg, while that on the liver, gall-bladder, bile ducts and pancreas is by Mr. E. Guy Turner. Both sections are concise and practical.

Of the remaining chapters that devoted to a consideration of the upper and lower urinary tract, by Mr. Thomson Walker, is by far the most extensive.

The volume well maintains the high standard set by the

first volume though, as is to be expected in a work of this sort, a certain amount of inequality in the merit of the various sections must exist. The work is one we can confidently recommend. The illustrations are abundant, well selected and very nicely reproduced. They add much to the value of the letterpress.

A Treatise on Treatment. Designed for the use of Practitioners and Students of Medicine. By JOGENDER LAL CHUNDRA, L.M.S. (Calcutta University), Rustomjee Scholar ; M.B. Calcutta University, with First Place ; late Lecturer on Anatomy, College of Physicians and Surgeons, Calcutta ; late Medical Officer, Corporation of Calcutta ; Examiner in Clinical Medicine, National Medical College, Calcutta. With Charts and Illustrations. First Edition. Calcutta : 5, Gopee Kristo Paul's Lane. 1911. Pp. 684.

WE congratulate Dr. J. L. Chundra on his research, for he has levied contributions from the medical journals of all countries, and produced a useful *Vade mecum* for medical practitioners. The book is primarily intended for practitioners living in India, but as much of the matter is valuable, all may benefit by consulting it. There is no claim made for originality, therefore there is little left for us to notice other than the admirable arrangement of the contents and the industry of the compiler in the field of therapeutics.

A Manual of Elementary Zoology. By L. A. BORRADAILE, M.A. London : Henry Frowde, Hodder & Stoughton. 1912. Crown 8vo. Pp. x.+470.

THIS is an excellent manual of Zoology. The types selected are those of most general interest to students, and their treatment is illuminating, each type standing out clear and complete.

Connecting chapters on general structure and function form links which give coherence to the series of studies.

The most recent discoveries have been incorporated, and the volume is both reliable and up to date.

The author evidently approves the contrast drawn by Dobell between the protozoa as non-cellular and the metazoa as cellular, holding that a cell is a portion of the body of a whole organism which has become specialised for the performance of particular functions, and not a whole organism with possibly some functions developed and others suppressed. To most workers the suggestion will be confusing rather than illuminating.

There is a large number of illustrations (301). Some, like the poor, we have always with us, but the great majority are original, and reflect credit both on author and artists.

“ Minor Surgery.” By LEONARD A. BIDWELL, F.R.C.S., Senior Surgeon to West London Hospital, &c. Second Edition, revised and enlarged. One hundred and twenty-nine Illustrations. London: University of London Press; Hodder & Stoughton and Henry Frowde. 1913. Demy 8vo. Pp. xvi + 299.

PERHAPS the best review of this work is contained in the publisher's preface to the second edition:—

“ The fact that a second edition of this work has become necessary within twelve months of the publication of the first is sufficient indication that it met a need. Based, as it is, upon the practice and experience of a surgeon to a large hospital, it lays down definite and distinct lines of teaching which admit of no ambiguity,” &c.

To this we would like to add that the reader will not find any novelty or indeed any line of treatment which has not stood the test of time. From a student's point of view this is as it should be, but surgeons will be disappointed in that the author has not crystallised any ideas from his vast experience, which although not in accordance with the teaching of the average text-book, yet are more worth recording than that explaining the methods of applying a capelin bandage.

Transactions of the American Otological Society. Vol. XII.
Part III. New Bedford, Massachusetts. 1912. Pp.
xii + 218.

At the Forty-fifth Annual Meeting of the American Otological Society, Dr. J. H. Bryan related several cases of great interest in which affections of the posterior sinuses of the nose produced violent reflex pain in the ear. He observed :—"Cases in which earache is a symptom of posterior sinus diseases are undoubtedly rare, but they, according to my experience, occur sufficiently often to make a record of them desirable. The pain is simply reflex in character, and does not depend upon any pathological condition present in the ear. In the several cases of this reflex pain that have come under my observation, I have found nothing more than a very moderate form of chronic catarrhal inflammation in the ear, and even that has only been present in two of my cases."

A series of papers was then read on Labyrinthine Affections, and many interesting remarks were made and instructive cases were mentioned.

Dr. J. B. Rae discussed the course of Acute Diffuse Suppuration of the Labyrinth, and clearly differentiated between a circumscribed and a diffuse inflammation. He also stated that many of these cases rapidly get better without operation, and that, on the whole, the wisest course of action is either to leave them alone, or to do the major labyrinthine operation; that the half-way house of a "Radical Mastoid" alone is not a wise proceeding. He lays down that the special points to be observed in an acute invasion of the labyrinth are as follow :—

(1) Under general conditions, the presence of temperature and headache : headache not to be confused with pain in the ear or temporal region.

(2) Under local conditions it is important to observe whether it is an acute or a chronic ear affection, and especially the presence of a marginal perforation in the upper posterior part of the drum.

(3) The spontaneous evidences are (a) vertigo, with nausea and vomiting; (b) spontaneous rotatory nystagmus, and (c) disturbances of equilibrium.

Under this heading, note that the spontaneous nystagmus is to the diseased side for the first forty-eight hours or so, and at the end of that time may have entirely disappeared, or be evident only on extreme abduction. As the disease progresses, more destruction takes place, and as a result of the imbalance of the tonus of the centres on the two sides a spontaneous rotatory nystagmus will now be to the good side, and again, after a short period the equilibrium will be established, and this spontaneous nystagmus will rapidly decrease. Note, therefore, that the whole of this "symptom complex" may occur and subside in a period of four or five days. Should the case progress to further complications, they will be either meningeal or take the form of an abscess in the cerebellum. The first may be considered invariably fatal, and the latter within the bounds of cure. Here lumbar puncture will be of great assistance. When cerebellar abscess is present there may be persistent spontaneous rotatory nystagmus. Unlike that of vestibular origin the nystagmus remains to the affected side and increases in intensity from day to day.

Dr. N. H. Pierce related three cases in which surgical interference met with success, and the labyrinthine affection rapidly subsided. He laid great stress on the fact that it may be impossible to differentiate between an acute serous and a purulent labyrinthitis.

Dr. Shambaugh contributed an article on the origin of Compensatory Tonus after Destruction of the Labyrinth. He concluded his paper with the following remarks:—"The restoration of equilibrium which follows the destruction of both labyrinths is never a complete restoration of the normal equilibrium. The extra labyrinth tonus which supplants the labyrinth tonus is not as perfect a mechanism for preserving the equilibrium as is the tonus from the highly specialised sense organs in the labyrinth. In the case of the sudden loss of one labyrinth

the rapid re-adjustment of equilibrium which follows is dependent, as pointed out above, on the development of the extra labyrinth compensatory tonus. The re-adjustment is not a complete substitute for the labyrinth tonus. It is only in cases of long standing unilateral labyrinth destruction where the restoration of equilibrium is apparently perfect, and here the compensatory tonus from the opposite labyrinth has fully developed so as to supplant completely the compensatory extra labyrinth tonus."

In a very interesting paper on the Insidious Latent Period of *Streptococcus mucosus*, Dr. F. Whiting mentioned several cases which show that even after one has operated on ears and considered them to be quite out of danger and practically healed, a sudden re-appearance of symptoms going on to meningitis and death may occur, and this without their being any obvious cause for it, and by bacterial examination he has found in these cases that this particular streptococcus is always present. It behoves one, therefore, in cases where this organism is found, to give special care to the prognosis.

EDMONTON MEDICAL SOCIETY.

WE are informed that this Society has established a Library. The librarian, Mr. Heber C. Jamieson, M.B., will be very glad to receive gratuitous literature. His address is 501 Tegler Block, Edmonton, Alberta, Canada. We visited this capital of the Province of Alberta in the year 1909, and since that date the growth of the city, which is in the same latitude as Manchester, has been phenomenal. The estimated population in July, 1912, was 53,383. According to the Census of 1911 it was not half that figure—namely, 24,882.

PART III.

MEDICAL MISCELLANY.

Reports, Transactions, and Scientific Intelligence.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

President—WALTER G. SMITH, M.D., F.R.C.P.I.

General Secretary—J. A. SCOTT, M.D., F.R.C.S.I.

SECTION OF OBSTETRICS.

President—A. J. HORNE, F.R.C.P.I.

Sectional Secretary—G. FITZGIBBON, M.D., F.R.C.P.I.

Friday, December 13, 1912.

THE PRESIDENT in the Chair.

Myomatous Uterus.

THE PRESIDENT showed a specimen of myomatous uterus, which was removed from an unmarried woman aged thirty. Four years ago the patient had a bad attack of diarrhœa, lasting for about three weeks. A large swelling was noticed in the lower part of the abdomen, and at the time she complained of great irritation just above the symphysis pubis. The swelling gradually increased in size for about a year, and then grew more rapidly. In the morning it was found that the lump was generally on the side on which the patient lay during the previous night, and when she leaned to one side she could feel the lump move to the opposite side. Menstruation was regular and normal in quantity. On admission to hospital the patient looked healthy. On inspection the abdomen appeared very large, and equally so on both sides of the middle line. On percussion there was dulness over the whole part. When first seen the tumour was in the middle line, and presented so few characteristic features as to make the diagnosis difficult. It was impossible to make a satisfactory vaginal examination without anæsthesia. However, from the mobility of the tumour, the

conclusion was formed that it was a fibroid, although menstruation was quite regular. When the abdomen was opened large veins were to be seen all over the tumour, so that there was a doubt as to whether it was a case of pregnancy. It was, therefore, thought necessary to open into the central line of the tumour before removal, when it was found to be a myomatous uterus. The tumour weighed 8½ pounds.

PROFESSOR ALFRED SMITH said that the procedure he usually followed in these cases was simple—*i.e.*, if the uterus be pregnant, intermittent contractions could be observed. If the uterus contracted it was pregnant, and if it did not it was non-pregnant. A sponge out of hot water pressed over either cornu of the uterus would help to stimulate the contraction. He perfectly sympathised with the difficulty in diagnosis until he adopted the above-mentioned procedure.

DR. PUREFOY observed that the case demonstrated a point of importance, even when there was an opportunity for ocular inspection—*viz.*, the impossibility of saying whether a tumour is solid or cystic. Reference had been made to the difficulty of determining in a case of fibroid uterus whether pregnancy is present or not. This he considered a point of extreme difficulty, or, probably, impossible. The large veins over the specimen also probably increased the difficulty of diagnosis.

DR. HORNE, replying to the remarks, said that since he had heard the opinions expressed he considered himself warranted in bringing the specimen before the Section. The point raised by Dr. Smith he considered important, and he (Dr. Horne) had held the tumour in his hands for a considerable time, but felt no contractions or fœtal movements, yet he was not convinced that it was not a pregnant uterus, but he thought the idea of applying hot cloths to encourage the contraction of the uterus a very important one.

Polypus complicating Inversion of the Uterus and illustrating the difficulty of Diagnosis.

DR. E. H. TWEEDY said the patient was sent to him with a diagnosis of inversion of the uterus. She was a union patient in a far-advanced state of anæmia and shock. She was half-witted. Her condition was so serious he did not

dare to examine her for at least eight days. Ergot and stimulants were administered and the vagina was plugged. At the expiration of a week he found a round tumour protruding to within an inch of the vulva. It bled easily. Under anæsthesia he failed to make a diagnosis by any of the recognised methods. The cervix could not be felt. Rectal and bi-manual examination afforded no information. He, however, established the diagnosis by a method not before suggested. Two fingers were passed into the vagina above and below the tumour, and these were placed on its pedicle. The feeling of the latter was unmistakably that of uterine tissue. He thought it was worth remembering that if there is inversion of the uterus with a polypus the pedicle will give this characteristic feel. He proceeded to remove the myoma, and in doing so he opened a cyst which contained fluid under great tension. There was very severe bleeding from the wound. The uterus was easily inverted by the application of three-bullet forceps. Continuous rectal irrigation was afterwards kept up for twenty-four hours.

DR. TWEEDY also showed a specimen of sloughing myoma, the removal of which per vaginam caused acute inversion of the uterus.

THE PRESIDENT said the case showed one of the interesting effects of polypus complicating inversion. He mentioned that polypus complicating inversion was very rare, and the points raised as regards diagnosis were of great importance.

DR. SOLOMONS said it seemed to him that the treatment accorded to the patient before operating had saved her life, whereas immediate operation would probably have killed her. The severe constitutional symptoms often associated with uterine polypi, both large and small, were never dealt with sufficiently in text-books. He wondered if a diagnosis might have been more easily made by splitting the perineum, whereby the operation itself would have been facilitated.

DR. SHEILL thought a point of interest was the reference to the palpation of the pedicle of the tumour. He found that the uterus felt like a collapsed tube, whereas a tumour was not hollow and was more resistant.

DR. PUREFOY said the difficulty of diagnosis in these cases in which polypus had given rise to inversion was considerable, especially where the polypus was sessile. In such cases it became exceedingly difficult to determine how much

of the tumour was polypus and how much was uterus. He congratulated Dr. Tweedy on the jubilant way in which he spoke of re-inversion of the uterus. He had three cases of the kind where the inversion complicated parturition, and some months elapsed before they came under treatment. In each case the reposition was effected by steady pressure applied to the fundus while the cervix was held by two-bullet forceps. He had shown at a meeting of the Section a simple repositor which had proved very helpful in the proceeding.

DR. TWEEDY, in replying to the remarks, said he found it very easy to push back the uterus in one case, but in the second there was some difficulty.

Interesting Complications of a Hysterectomy.

PROFESSOR ALFRED SMITH communicated a paper on this subject. [It was published in the number of the JOURNAL for January, 1913, page 12.]

THE PRESIDENT said the case demonstrated further the difficulty of diagnosis. It had been suggested that these needles were probably taken in a packet when the patient was a child, so that probably all the needles were taken in at the same time, and it was well known that when a needle entered the body it travelled in the most extraordinary manner to different parts of the system.

DR. PUREFOY referred to the case of a lady who had come under his care, having swallowed, during an epileptic fit, a plate with four teeth on it. They, however, passed through the alimentary canal in a fortnight afterwards.

DR. JELLETT referred to a case treated at the Adelaide Hospital some years ago in which thirty-nine needles were removed from a girl's stomach, and within two years she returned with a further crop.

DR. ROWLETTE said that some years ago, in a *post-mortem* examination at Steevens' Hospital, he found an inch and a half pin in the appendix which had given rise to abscess of the liver. He considered that foreign bodies were more common than reports showed as the cause of appendicitis.

A Case of Fibro-sarcoma of the Ovary.

DR GIBBON FITZ-GIBBON read a paper on a case of fibro-sarcoma of the ovary removed from a patient aged forty-

two. The tumour probably existed for over three years, and weighed over 10 lbs. He thought that all solid tumours of the ovary should be looked upon as malignant at the time of operation, and the other ovary should be removed.

DR. JELLETT referred to a case of sarcoma of the ovary on which he had seen Sir William Smyly operate some years ago, which was of interest on account of the after history. The tumour was an entirely capsulated growth. The patient was a girl aged nineteen or twenty, and she went on very well for a short period, but then began to get worse. She got a high temperature, which eventually rose to 106° or 107°. She then lost control of the lumbar centres, and a tumour appeared under the skin over the lumbar spine. She died, and it was found that secondary growths had developed behind the glands of the peritoneum and had cut through the spinal column. He agreed with Dr. FitzGibbon as to the removal of both ovaries in cases of malignant tumour affecting one, and also in treating all solid tumours of the ovaries as malignant at the time of operation.

DR. NEILL referred to a case in which Dr. Kidd, while Master of the Coombe Hospital, removed two sarcomatous ovaries. There was great difficulty in arresting the hæmorrhage, as the tissues were very degenerate. There was great extension of the disease to the peritoneum. The case was reported in the "Transactions of the Royal Academy of Medicine in Ireland," Vol. XVIII., 1900, page 297.

DR. ALFRED SMITH said his experience was that ascites was generally associated with malignant tumours. He had come to the conclusion owing to the bad subsequent history of these cases that the mere removal of the ovary was bad surgery. He was firmly convinced that whenever one or two solid ovarian tumours were found the uterus should also be removed, as there was absolutely no use in leaving it behind.

DR. PUREFOY said the case appealed to him with regard to three points:—(1) He had noticed that in the early stage of their growth these tumours are associated with good health. (2) The difficulty of distinguishing between solid ovarian tumours and fibroid with long pedicle. He recollected a case in which operation was postponed for some months because a tumour with a long pedicle was regarded as fibroid, and when it was removed it proved to be a malign-

nant tumour of the ovary. Recurrence of the disease occurred a few months later. (3) The invariable recurrence which follows in the case of such tumours. This being his opinion, he could not adopt the view of Professor Smith—that when the tumour is suspected of being malignant the uterus should be removed, as it exposed the patient to increased risk without any compensating advantage. He considered, however, that recurrence might be delayed if the second ovary was removed. In these tumours much difficulty has been experienced in arriving at a just estimate of their exact histology.

DR. ROWLETTE agreed with Dr. Purefoy that it was generally difficult to ascertain whether solid tumours of the ovary were sarcomatous or carcinomatous. It might require a very exhaustive examination of the tumour to arrive at a diagnosis. A point which he considered of help in judging during operation whether a tumour was malignant or not was that malignant tumours, when incised, presented as a rule a peculiar translucent and homogeneous appearance, innocent tumours being more opaque. He pointed out this characteristic in the specimen shown.

DR. FITZGIBBON, in replying, said he was glad the Section seemed to be generally agreed as to the removal of the second ovary. With regard to going further and removing the uterus, he agreed with Dr. Purefoy when he said he did not consider it of much use. The involvement of the uterus in a case could only be as the result of metastasis, while the reason for removing the second ovary was on account of its histological relationship.

SECTION OF PATHOLOGY.

President—PROFESSOR A. H. WHITE.

Sectional Secretary—W. BOXWELL, F.R.C.P.I.

Friday, January 3, 1913.

THE PRESIDENT in the Chair.

Specimens and Preparations of Norwegian Scabies.

DR. W. G. HARVEY, who showed a patient suffering from above and also specimens under the microscope, commenced

by saying that he was indebted to Dr. Wallace Beatty not only for permission to show the case, but for his notes of the case, and for references to the literature. The patient, a man of thirty-nine, presented himself for treatment at the Adelaide Hospital on the 18th of November, 1912. His family history revealed nothing of importance. He had a congenital deformity of the left thigh (undeveloped achondroplasia), and he wore an apparatus affixed to his left boot to lengthen his leg and enable him to walk. His general health had always been good. He was employed as a car-driver, but had to give up work owing to the condition of his hands. The eruption commenced ten years ago on his hands and fingers, and remained limited to his hands till about eight or ten months ago, when it began to involve his body generally. About two years ago his hands were x-rayed, the condition having been probably regarded as a form of hyperkeratosis. Latterly he had been fearfully tormented with itching, and owing to this was kept awake at night. The condition when first seen was stated to be as follows:—The scalp was covered with abundant dry, greyish scales, forming in places a thick coating resembling psoriasis. There was some scaling on his forehead. The trunk was universally reddened (erythroderma), the skin somewhat thickened, especially of the back, and the surface was covered more or less abundantly with dry scales, causing roughness in most places, but on certain prominent parts—on the shoulders over the scapulæ—the scales formed a thick, dry, hard, adherent coating, and places on the back showed traces of moisture suggestive of an eczematous state. The skin of the abdomen was universally reddened, thickened, and rough. There was an extremely heavy coating of dry adherent scales on the prominences of the hips over the trochanters and on the buttocks, especially the right buttock, on which he always rested on account of the deformity present on the left side; this coating was subsequently, when treatment was commenced, removed with extreme difficulty, much scrubbing being required to detach the scales. The extensor aspect of the elbows was covered with thick, heaped up, dry, adherent scales; the arms showed patchy redness and scaling, but were not universally affected. The hands and fingers presented a remarkable appearance, projecting masses of dry, greyish scales were

present over and round the localities of the nails. These masses formed rocky, somewhat conical or irregular projections, and were evidently the result of implication of the nails and their surroundings. Here and there on the dorsum and borders of the hands and on the wrists were hemispherical, dry, dirty, scaly masses, averaging about one centimetre in diameter, but some were larger. The surface of these masses was smooth. One or two of them were removed with the blade of a forceps. They were readily detached once the edges had been raised all round. This method of removal caused much pain, so that the remainder were left for subsequent removal by softening in hot sulphur lotion. The skin of the thighs and legs was partially affected, the affected places being reddened and rough. The flexor aspect of the knees was most affected. The nails (and their surroundings) of the toes were affected in a similar manner, but in a slighter degree, to the fingers. Scaly projections covered the disorganised nails; scaly masses were also present here and there on the feet.

Villous Adenoma of Rectum.

MR. WILLIAM PEARSON showed a specimen from a female, aged fifty-six, who was admitted to the Adelaide Hospital complaining of piles with attacks of diarrhœa and hæmorrhage. She had enjoyed good health up to a year previously, when irregular attacks of diarrhœa commenced, alternating with constipation. The attacks were accompanied with some protrusion of the bowel. The motions were offensive, and contained large quantities of mucus and frequently bright red blood. There was no pain, nor vomiting. The patient was a good colour, but stated she had been losing weight. The abdomen was distinctly full, soft, and somewhat doughy. Distended coils of small intestine were clearly seen against the abdominal wall and the colon was full and tympanitic, with some fæcal masses palpable. No visible peristalsis was observed. Altogether the abdomen suggested chronic intestinal obstruction in the lower bowel. On rectal examination no hæmorrhoids could be found, but the entire mucous membrane, from immediately above the anal canal to the upper limit which could be reached by the finger, felt soft and hypertrophied, with numerous polypoid masses. No obstruction was met with, but the clinical

picture was so suggestive of carcinoma of the colon that it was decided to make an exploratory abdominal incision. This was done through the left rectus muscle when an enormously distended atonic colon and cæcum were found, and it was seen that no growth existed above the rectum. The abdomen was then closed, and the specimen as now presented was removed per anum by drawing it down with the aid of clip forceps and excising it after the manner of Whitehead's operation for hæmorrhoids. It stripped easily off the muscular coats of the bowel. The specimen proved to be an unusually large villous adenoma. Innumerable fine branching processes were to be seen springing from the mucous membrane. These lay so closely packed that their depth was only apparent by holding the specimen under a tap of running water. They closely resembled in appearance the ordinary villous tumour of the bladder. In consistence the tumour was quite soft, save in one small area near the centre, where the villi were much less pronounced and slight induration could be felt. There was no involvement of the submucous tissues. Microscopic section of the growth showed no malignancy. Since the operation the patient has been quite free of symptoms, and control over the bowels is perfect.

Ruptured Thoracic Aneurysm.

DR. R. M. BRONTE showed two cases of thoracic aneurysm. One had ruptured into the pericardial sac, the other was a dissecting-room specimen. It showed an aneurysm on both sides of the thorax, the left side dilatation causing extensive compression of the upper lobe of the lung. Both cases were associated with extensive pleurisy.

Rupture of Right Ventricle.

DR. T. T. O'FARRELL showed a specimen of rupture of the right ventricle. The patient was brought in dead to St. Vincent's Hospital on the 28th of October last. He was a man of about middle age who, while cleaning the top windows of a hall, slipped and fell a distance of sixty-two feet, passing through an inner glass roof. He is said to have fallen on his shoulders and then rolled over. Death was instantaneous. *Post-mortem* examination showed the head to be normal. There was slight prominence of the second lumbar vertebra. It is interesting to note that there was an

exostosis on the left side of the body of this bone, but no dislocation or fracture was found. The following injuries were found:—Contusions at inner side of the right knee and ankle; supracondyloid fracture of the left humerus; Colles' fracture, left wrist; comminuted fracture, lower end of left tibia and fibula, involving ankle joint; deep incised wound of sole of left foot. The condition of the abdominal organs was practically normal. The liver was enlarged, weighing four pounds. The bladder was distended. An examination of the thorax showed fracture of the second and third left costal cartilages, fracture of sixth rib on right side, fracture of sternum at junction of first with second part. Anterior mediastinum contained a gelatinous blood-stained fluid. The pericardium was adherent to the sternum, but not to the heart, and was found full of blood, though not greatly distended. The heart showed some excess of fat, and was contracted. The right ventricle was injured in two places. First, an irregular semi-circular wound one and three-quarter inches long, beginning below the origin of the pulmonary artery and extending downwards more or less parallel to, and with its convexity towards, the inter-ventricular groove. Second, a punctured wound one-half inch in diameter slightly below the auriculo-ventricular groove and at the point of junction between the middle third of a line drawn from the margo acutus to the inter-ventricular groove. The right lung weighed one and three-quarter pounds; slight chronic pleurisy with interstitial emphysema. The left lung weighed one pound six ounces, and contained an apparently healed tubercular focus at the apex. A point of interest in the case was that the injuries to the sternum and costal cartilages did not correspond to the generally accepted surface-marking of the right ventricle. The right ventricle is said to be covered by most of the middle portion of the sternum and the third, fourth, fifth, and part of the sixth left costal cartilages, none of which, with the exception of the sternum, were injured in the present case. One would rather expect the right auricle to be injured. The only explanation would appear to be that in falling the enlarged liver pressed the heart upwards. In reply to a question asked by Dr. O'Kelly as to whether the pericardium was torn, Dr. O'Farrell said that the pericardium was adherent to the back of the sternum, but there was no definite perforation into it.

SANITARY AND METEOROLOGICAL NOTES.

VITAL STATISTICS

For four weeks ending Saturday, January 25, 1913.

IRELAND.

THE average annual death-rate represented by the deaths—exclusive of deaths of persons admitted into public institutions from without the respective districts—registered in the week ended January 25, 1913, in the Dublin Registration Area and the twenty-six principal provincial Urban Districts of Ireland was 21.3 per 1,000 of their aggregate population, which for the purposes of these returns is estimated at 1,199,180. The deaths registered in each of the four weeks of the period ending on Saturday, January 25, and during the whole of that period in certain of the districts, alphabetically arranged, correspond to the following annual rates per 1,000 :—

COUNTY BOROUGH, &c.	Week ending				Average Rate for 4 weeks
	Jan. 4	Jan. 11	Jan. 18	Jan. 25	
27 Town Districts	22.0	21.0	22.2	21.3	21.6
Dublin Reg. Area ...	22.8	22.8	22.3	19.7	21.9
Dublin City	25.5	22.8	23.2	21.7	23.3
Belfast	23.8	21.1	20.3	24.5	22.4
Cork	27.2	19.7	25.2	21.8	23.5
Londonderry	14.0	20.3	16.5	30.5	20.3
Limerick	17.6	12.2	13.5	16.2	14.9
Waterford	30.4	28.5	32.3	19.0	27.5

The deaths (excluding those of persons admitted into public institutions from without the respective districts) from certain epidemic diseases registered in the 27 districts during the week ended Saturday, January 25, 1913, were equal to an annual rate of 1.7 per 1,000. Among the 186 deaths from all causes

for Belfast are 13 from measles, 4 from scarlet fever, 2 from diphtheria, 4 from diarrhoea and enteritis of children under 2 years of age, and 1 from cerebro-spinal fever. One of the 32 deaths from all causes for Cork is from scarlet fever. Included in the 10 deaths from all causes for Waterford are 2 from whooping-cough. One of the 4 deaths from all causes for Newry is from measles, and 3 deaths from this disease are among the 12 deaths from all causes for Tralee.

DUBLIN REGISTRATION AREA.

The Dublin Registration Area consists of the City of Dublin, as extended by the Dublin Corporation Act, 1900, together with the Urban Districts of Rathmines, Pembroke, Blackrock and Kingstown. The population of this area is 403,000; that of the City being 308,187, Rathmines 38,769, Pembroke 29,942, Blackrock 9,161, and Kingstown 16,941.

In the Dublin Registration Area the births registered during the week ended January 25 amounted to 244—129 boys and 115 girls—and the deaths to 161—78 males and 83 females.

DEATHS.

The registered deaths, omitting the deaths (numbering 9) of persons admitted into public institutions from localities outside the Area, represent an annual rate of mortality of 19.7 per 1,000 of the population. During the four weeks ending with Saturday, January 25, the death-rate averaged 21.9, and was 3.1 below the mean rate for the corresponding portions of the 10 years 1903–1912.

The total deaths registered, numbering 161, represent an annual rate of 20.8 per 1,000. The annual rate for the past four weeks was 23.3 per 1,000, and the average annual rate for the corresponding periods of the past ten years was 26.2 per 1,000 of the mean population for all deaths registered.

The total deaths from all causes included 2 from whooping-cough, 4 from diphtheria, 1 from influenza, and 2 of children under 2 years of age from diarrhoea and enteritis.

In each of the 3 preceding weeks, deaths from whooping-cough were 2, 0, and 2; deaths from diphtheria were 2, 3, and 3; deaths from influenza were 1, 2, and 1; and deaths of children under 2 years of age from diarrhoea and enteritis were 7, 5, and 3.

There were 20 deaths from tuberculous disease. This number includes 14 deaths from pulmonary tuberculosis, 2 from tuberculous meningitis, 1 from abdominal tuberculosis, and 3 from disseminated tuberculosis. In each of the 3 preceding weeks deaths from tuberculous disease numbered 30, 27, and 32.

Broncho-pneumonia caused 4 deaths, lobar pneumonia 1 death, and pneumonia (type not distinguished) caused 10 deaths.

Organic diseases of the heart caused the deaths of 10 persons, and 36 deaths from bronchitis were recorded.

Eight deaths were caused by cancer.

The deaths of 4 infants were caused by convulsions, that of 1 infant by congenital malformation, those of 5 through premature birth, and those of 10 infants by congenital debility.

There were 2 deaths by accidental burns or scalds, one being that of an infant aged 7 months, and the other that of a child aged 12 years.

In 11 instances the cause of death was "uncertified," there having been no medical attendant during the last illness. These cases include the deaths of 7 infants under one year of age.

Forty-five of the persons whose deaths were registered during the week ended January 25 were under 5 years of age (34 being infants under one year, of whom 15 were under one month old), and 38 were aged 65 years and upwards, including 26 persons aged 70 and upwards. Among the latter were 14 aged 75 years and upwards.

STATE OF INFECTIOUS DISEASE IN THE DUBLIN REGISTRATION AREA AND IN BELFAST.

The usual returns of the number of cases of infectious diseases notified under the "Infectious Diseases (Notification) Act, 1889," and the "Tuberculosis Prevention (Ireland) Act, 1908," as set forth in the following table, have been furnished by Sir Charles A. Cameron, C.B., M.D., Medical Superintendent Officer of Health for the City of Dublin; by Mr. Fawcett, Executive Sanitary Officer for Rathmines and Rathgar Urban District; by Mr. Manly, Executive Sanitary Officer for Pembroke Urban District; by Mr. Heron, Executive Sanitary Officer for Blackrock Urban District; by the Executive

Sanitary Officer for Kingstown Urban District; and by Dr. Bailie, Medical Superintendent Officer of Health for the City of Belfast.

TABLE SHOWING THE NUMBER OF CASES OF INFECTIOUS DISEASES notified in the Dublin Registration Area (viz.—the City of Dublin and the Urban Districts of Rathmines and Rathgar, Pembroke, Blackrock, and Kingstown), and in the City of Belfast, during the week ended January 25, 1913, and during each of the preceding three weeks. An asterisk (*) denotes that the disease in question is not notifiable in the District.

CITIES AND URBAN DISTRICTS	Week ending	Measles	Rubella, or Epi- demic Rose Rash	Scarlet Fever	Typhus	Relapsing Fever	Diphtheria	Membranous Croup	Pyrexia (origin uncertain) ^a	Etiotic or Typhoid Fever	Erysipelas	Puerperal Fever	Whooping-cough	Cerebro-spinal Fever	Tuberculous Phthisis (Phthisis),	Acute Polio- myelitis	Total
City of Dublin	Jan. 4	■	■	17	-	-	8	-	-	-	11	1	○	-	12	-	49
	Jan. 11	○	○	17	-	-	9	-	1	5	7	-	■	-	10	-	49
	Jan. 18	○	*	10	-	-	6	-	-	3	3	-	■	-	14	1	37
	Jan. 25	○	*	16	○	-	8	-	-	2	7	-	■	-	16	-	56
Rathmines and Rathgar Urban District	Jan. 4	○	*	4	-	-	7	-	-	-	-	-	*	*	■	○	11
	Jan. 11	○	*	3	-	-	1	-	-	1	-	-	○	○	*	○	5
	Jan. 18	○	*	3	-	-	-	-	-	1	-	-	○	○	*	○	4
	Jan. 25	○	*	3	-	-	2	-	-	1	-	-	○	○	*	○	6
Pembroke Urban District	Jan. 4	-	-	1	-	-	-	-	-	-	-	-	10	*	*	■	11
	Jan. 11	-	-	-	-	-	-	-	-	-	-	-	5	*	3	*	8
	Jan. 18	-	-	-	-	-	-	-	-	-	-	-	5	*	*	*	5
	Jan. 25	-	-	2	-	-	-	-	-	-	1	-	3	*	1	*	7
Blackrock Urban District	Jan. 4	○	○	-	-	-	-	-	-	-	-	-	○	-	*	*	-
	Jan. 11	○	○	-	-	-	-	-	-	-	-	-	○	-	○	*	-
	Jan. 18	○	○	1	-	-	-	-	-	-	-	-	○	-	○	*	1
	Jan. 25	○	○	-	-	-	-	-	-	-	-	-	*	-	*	*	-
Kingstown Urban District	Jan. 4	*	*	1	-	-	-	-	-	1	-	-	○	*	-	*	2
	Jan. 11	*	○	3	-	-	-	-	-	1	2	-	○	*	1	■	7
	Jan. 18	■	*	3	-	-	-	-	-	2	1	-	*	*	3	■	9
	Jan. 25	*	○	-	-	-	-	-	-	-	1	-	*	○	-	■	1
City of Belfast	Jan. 4	○	*	22	-	-	6	-	1	-	8	-	○	○	8	○	45
	Jan. 11	○	○	34	-	-	10	-	-	1	8	-	○	○	8	*	61
	Jan. 18	○	○	24	-	-	3	2	-	4	7	-	○	*	7	*	47
	Jan. 25	○	○	18	-	-	10	-	-	5	5	1	○	*	11	*	53

^a Continued Fever.

CASES OF INFECTIOUS DISEASES UNDER TREATMENT IN DUBLIN HOSPITALS.

During the week ended January 25, 1913, 2 cases of measles were admitted to hospital, one was discharged and 3 cases remained under treatment at the close of the week. In the three preceding weeks such cases were 1, 2, and 2 respectively.

Eighteen cases of scarlet fever were admitted to hospital, 24 were discharged, and 117 cases remained under treatment at the close of the week. This number is exclusive of 18

convalescent patients who remained under treatment at Beneavin, Glasnevin, the Convalescent Home of Cork Street Fever Hospital, Dublin. At the close of the 3 preceding weeks the cases in hospital were 114, 121, and 123 respectively.

Ten cases of diphtheria were admitted to hospital, 9 were discharged, and there were 3 deaths. The cases in hospital, which at the close of the 3 preceding weeks numbered 53, 51, and 49 respectively, were 47 at the close of the week.

Six cases of enteric fever were admitted to hospital, 3 were discharged, there was one death, and 21 cases remained under treatment in hospital at the close of the week, the respective numbers in hospital at the close of the 3 preceding weeks being 20, 17, and 19.

Eight cases of typhus were admitted to hospital during the week and remained under treatment at its close.

In addition to the above-named diseases, 6 cases of pneumonia were admitted to hospital, 4 were discharged, there was 1 death, and 17 cases remained under treatment at the end of the week.

ENGLAND AND SCOTLAND.

The mortality in the week ended Saturday, January 25, in 96 large English towns (including London, in which the rate was 17.8) was equal to an average annual death-rate of 17.0 per 1,000 persons living. The average rate for 16 principal towns of Scotland was 20.2 per 1,000, the rate for Glasgow being 22.3, and that for Edinburgh 17.7.

INFECTIOUS DISEASE IN EDINBURGH.

The Registrar-General has been favoured by A. Maxwell Williamson, M.D., B.Sc., Medical Officer of Health for Edinburgh, with a copy of his Return of Infectious Diseases notified during the week ended January 25. From this Report it appears that of a total of 57 cases notified, 29 were of phthisis, 21 of scarlet fever, 5 of diphtheria, one of erysipelas, and one of enteric fever. Among the 365 cases of infectious diseases in hospital at the close of the week were 149 cases of scarlet fever, 103 of phthisis, 42 of whooping-cough, 29 of diphtheria, 14 of measles, 7 of chicken-pox, 6 of erysipelas, 5 of enteric fever, and one of puerperal fever.

METEOROLOGY.

Abstract of Observations made in the City of Dublin, Lat. 53° 20' N., Long. 6° 15' W., for the Month of January, 1913.

Mean Height of Barometer, - - -	29.608 inches.
Maximal Height of Barometer (26th, at 9 a.m.),	30.287 „
Minimal Height of Barometer (20th, at 9 a.m.),	28.875 „
Mean Dry-bulb Temperature, - - -	42.6°.
Mean Wet-bulb Temperature, - - -	41.0°.
Mean Dew-point Temperature, - - -	39.0°.
Mean Elastic Force (Tension) of Aqueous Vapour,	.243 inch.
Mean Humidity, - - - -	87.5 per cent.
Highest Temperature in Shade (on 7th), -	55.4°.
Lowest Temperature in Shade (on 13th), -	28.1°.
Lowest Temperature on Gross (Radiation) (14th)	24.7°.
Mean Amount of Cloud, - - - -	63.1 per cent.
Rainfall (on 21 days), - - - -	5.576 inches.
Greatest Daily Rainfall (on 10th), - - -	1.522 „
General Directions of Wind, - - - -	S., S.W., S.E.

Remarks.

An open, stormy, very wet month. The rainfall (5.576 inches) was only once exceeded in January—namely, in 1895, when 5.711 inches were recorded on 24 days. But the mean temperature of January, 1895, was 35.6°, compared with 43.4° in January, 1913. The wind was S.E., S., or S.W., on 44 out of 62 occasions when the direction was taken at 9 a.m. and 9 p.m. Gales (force 8) occurred on 5 days, fogs on 2 days; snow or sleet fell on 4 days, hail on 3 days. Lightning was seen on the 20th. During the first 12 days the barometer was almost constantly at or below 29 inches in Iceland and gradients for S.W. winds were very steep over the Atlantic. Later in the month atmospheric depressions passed nearer or directly over the British Islands. But in the deepest depression of the month the low reading of 28.22 inches was reported from Seydisfjörd, on the east coast of Iceland, at 7 a.m. of the 31st. The last 12 days of the month were very cold in Sweden, the thermometer falling to -4° at Stockholm on the 28th and to -26° at Haparanda on the 29th. In Spitzbergen at 7 a.m. on the 23rd the thermometer stood at -29° , or 61° below the

freezing point. In the same island on the morning of the 13th temperature was 35° Fahr., or 3° above freezing-point.

Mr. Richard M. Barrington reports that the rainfall at Fassaroe, Bray, Co. Wicklow, amounted to 10.42 inches, establishing a record precipitation for January. There had been no such rainfall in January at Fassaroe since the year 1860, when 16.27 inches were measured.

In Dublin the arithmetical mean temperature (43.4°) was above the average (41.7°) by 1.7°; the mean dry-bulb readings at 9 a.m. and 9 p.m. were 42.6°. In the forty-eight years ending with 1913, January was coldest in 1881 (M. T. = 33.2°), and warmest in 1898 (M. T. = 47.8°). In 1912 the M. T. was 42.1°.

The mean height of the barometer was 29.608 inches, or 0.266 inch below the corrected average value for January—namely, 29.874 inches. The mercury rose to 30.287 inches at 9 a.m. of the 26th, and fell to 28.875 inches at 9 a.m. of the 20th. The observed range of atmospheric pressure was, therefore, 1.412 inches.

The mean temperature deduced from daily readings of the dry-bulb thermometer at 9 a.m. and 9 p.m. was 42.6°, or 0.7° above the value for January, 1912. Using the formula, *Mean Temp.* = *Min.* + (*Max.* — *Min.*) × .52, the M. T. becomes 43.5°, compared with a thirty-five years' (1871–1905) average of 41.9°. The arithmetical mean of the maximal and minimal readings was 43.4°, compared with a thirty-five years' average of 41.7°. On the 7th the thermometer in the screen rose to 55.4°—wind, S.W.; on the 13th the temperature fell to 28.1°—wind, calm. The minimum on the grass was 24.7° on the 14th.

The rainfall was 5.576 inches, distributed over 21 days. Of this amount 1.522 inches fell on the 10th. The average rainfall for January in the thirty-five years, 1871–1905, inclusive, was 2.210 inches, and the average number of rain-days was 18. The rainfall, therefore, and the rain-days were above the average—the rainfall to the extent of 152 per cent. The record rainfall for January was in 1895—namely, 5.711 inches on 24 days. In 1876, only .406 inch was measured on but 9 days. In 1907, only .428 inch fell on but 9 days. In 1911, only .638 inch fell on 10 days, but in 1912, 3.510 inches fell on 19 days.

The atmosphere was foggy on the 13th and 14th. High

winds were noted on 12 days, and reached the force of a gale on the 3rd, 9th, 10th, 11th, and 14th. Snow and hail fell on the 13th and 31st—hail alone on the 19th, and sleet on the 14th and 30th. A lunar halo was seen on the 16th, 18th, 21st, and 23rd; solar halos appeared on the 4th and 29th; a lunar corona on the 15th, 19th, and 21st. Temperature reached or exceeded 50° in the screen on 11 days; while it fell to 32° in the screen on 2 nights. The grass minimum was 32° or less on 13 nights. On the 13th the maximal temperature in the screen was 41.4° . Lightning was seen on the evening of the 20th.

At the Normal Climatological station in Trinity College, Dublin, Mr. C. D. Clark reports that the mean height of the barometer was 29.632 inches, the range of atmospheric pressure being from 30.30 inches at 9 a.m. of the 26th to 28.91 inches at 9 a.m. of the 20th. The mean value of the readings of the dry-bulb thermometer at 9 a.m. and 9 p.m. was 43.3° . The arithmetical mean of the daily maximal and minimal temperatures was 43.4° . The screened thermometers rose to 57° on the 7th, and fell to 25° on the 13th. On the 6th and 13th the grass minimum was 21° . Rain fell on 20 days to the amount of 5.35 inches, the greatest fall in 24 hours being 1.44 inches on the 10th. The duration of bright sunshine, according to the Campbell-Stokes recorder, was 33.3 hours, of which 3.8 hours occurred on the 14th. The mean daily sunshine was 1.1 hour. The mean temperature of the soil at 9 a.m. was 41.9° at a depth of 1 foot; at a depth of 4 feet it was 44.7° .

Captain Edward Taylor, D.L., reports a rainfall of 5.08 inches on 20 days at Ardgillan, Balbriggan, Co. Dublin. This measurement was 2.68 inches in excess of the average, and the rain-days were 2 in excess. The maximal fall in 24 hours was .74 inch on the 10th. The highest temperature in the shade was 54.0° on the 7th, the lowest was 25.0° on the 13th.

Mr. T. Bateman reports that the rainfall at The Green, Malahide, Co. Dublin, was 5.195 inches on 21 days. The greatest fall in 24 hours was 1.355 inches on the 10th. The mean shade temperature was 38.1° , the extremes being—highest, 51.0° on the 7th; lowest, 21.5° on the 12th.

At Cheeverstown Convalescent Home, Clondalkin, Co.

Dublin, Miss C. Violet Kirkpatrick registered 4.735 inches of rain on 22 days. The heaviest fall in 24 hours was 1.02 inches on the 10th.

At the Ordnance Survey Office, Phoenix Park, Dublin, rain fell on 21 days to the amount of 3.900 inches, the greatest measurement in 24 hours being .700 inch on the 10th. The total duration of bright sunshine was 47.8 hours, the largest amount recorded on one day being 5.3 hours on the 25th.

Dr. Christopher Joynt, F.R.C.P.I., measured 5.592 inches of rain on 21 days at 21 Leeson Park, Dublin. The heaviest fall in 24 hours was 1.550 inches on the 10th. In January, 1895, the rainfall at Leeson Park was 6.480 inches, but of this large amount 3.400 inches were the product of melted snow.

Dr. Arthur S. Goff reports that the rainfall at Belfort House, Dundrum, Co. Dublin, was 6.57 inches on 22 days, the greatest daily measurements being 1.48 inch on the 10th and 1.16 inch on the 19th. The thermometer in the shade ranged from 52° on the 23rd and 30th to 27° on the 13th. The mean shade temperature was 42.5°. Snow fell on the 13th and 31st : hail showers on the 30th.

At Manor Mill Lodge, Dundrum, Co. Dublin, Mr. George B. Edmondson recorded a rainfall of 6.81 inches on 21 days, the maximum being 1.77 inches on the 10th. The mean temperature of the month was 41.7°, the thermometric range being from 56° on the 4th to 28° on the 13th and 14th.

At Coolagad, Greystones, Co. Wicklow, Dr. John H. M. Armstrong measured 9.24 inches of rain on 28 days, the maximum in 24 hours being 1.81 inches on the 10th. On the 27th also 1.31 inches fell. There was a fall of snow on the 31st.

Mrs. Sydney O'Sullivan recorded a rainfall of 7.43 inches on 25 days at Auburn, Greystones, Co. Wicklow, the largest measurement in 24 hours being 1.23 inches on the 27th. There were hail showers on the 13th, and snow and sleet fell on the 31st.

At the Royal National Hospital for Consumption for Ireland, Newcastle, Co. Wicklow, the Resident Medical Officer, Dr. Charles D. Hanan, M.D., measured 8.19 inches of rain on 23 days, the maximum in 24 hours being 1.49 inches on the 10th. The mean maximal temperature in the screen was 46.1°, the mean minimum was 37.6°, and the resultant mean temperature was 41.8°. The screened thermometers rose

to 53° on the 4th and fell to 26° on the 13th. Snow fell on the 14th, 15th, 18th and 31st.

The Rev. Arthur Wilson, M.A., reports that rain fell on 28 days at the Rectory, Dunmanway, Co. Cork, to the amount of 11.55 inches, or 6.32 inches more than the average. The heaviest falls were 1.28 inches on the 27th, 1.03 inches on the 14th, 1.02 inches on the 10th, and 1.01 inches on the 7th. It was a very wet month—mild as a rule, but cold from the 11th to the 17th. Snow showers occurred on the 12th and 13th, and hail on the morning of the 16th and on the 30th and 31st. The rainfall of this month was exceeded only twice in the last 8 years—*i.e.*, in December, 1911 (12.41 inches), and December, 1907 (11.80 inches). Since November 22nd, 1912, there have been only 4 days without rain, and the rainfall of the succeeding period amounts to 25.09 inches on 67 days.

INFECTIOUS JAUNDICE.

IN a recent number of the *British Journal of Children's Diseases*, Dr. Leonard Guthrie describes a small epidemic of mild catarrhal jaundice in the Kilburn district, in which he obtained evidence of contagiousness. At the conclusion of a survey of the cases and of the literature, he states :—"Mild epidemics of so-called catarrhal jaundice have been especially prevalent in this country during the past three years. Although mild in character hitherto, it is possible that at any time they might become more formidable. This form of epidemic jaundice is not separable by any hard-and-fast line from Weil's disease, of which it may quite conceivably be a benign type. This catarrhal jaundice must be regarded as due to an acute hepatitis resembling mumps in some particulars. The prognosis in any case of jaundice in childhood, whether sporadic or epidemic, must be guarded, for acute yellow atrophy of the liver begins in just the same way; and, though it is very rare, the possibility should not be lost sight of. Finally, Dr. Guthrie remarks that it is hardly possible to return an emphatic negative to the question—"Is jaundice catching?"—*The Hospital*, January 25, 1913.

PERISCOPE.

HOW SHOULD BICARBONATE OF SODIUM BE PRESCRIBED IN STOMACH CASES ?

DR. E. BINET, of Vichy (*Le Progrès Médical*) considers that only moderate doses of bicarbonate of sodium must be given—a dose of one drachm and a half is the maximal daily dose. Under such conditions the patients for whom this salt should be prescribed are those affected with disorders of gastric evacuation, and in whose cases the stomach empties itself too slowly. Belated evacuations are met with in two characteristic conditions. In the first, owing to insufficient peristaltic contractions, the churning of the alimentary mass is too slow and insufficiently stimulates the opening of the pylorus. In the second, the muscle has retained its normal tonus ; but the contractions which it causes, however strong they may be, are only able to overcome very slowly the spasm which keeps the pylorus closed. In the first condition, the diminution of the secretion, hypopepsia, is side by side with the muscular atony ; it is the condition of its evolution and its very degree enables us to estimate the degree of the gastric hypotonicity. In the other condition, on the other hand, hyperpepsia is generally present, and the higher its percentage the easier and the stronger is the reflex closure of the pylorus. Clinically, gastric pain in itself seems to be a sign of abnormal evacuation, whatever be its form in the course of digestion or its conditions of time and duration. For all these reasons bicarbonate of sodium is indicated in a great number of cases. Except in cases when there is an acute ulceration (hæmatemesis or melæna) and except in some cases of gastric cancer, its use may be freely recommended. The drug must be considered not so much as giving an immediate and temporary result, but as a regulator of gastric digestion. Therefore it must be given to prevent pain rather than to stop pain. This is why it seems rational to prescribe it in small doses repeated in the course of the same digestion. The following combination seems to be the best to prescribe :—Sodii bicarbonatis, gr. 12 ;

magnesiæ ponderosæ, gr. 4 ; pulveris belladonnæ foliorum, gr. $\frac{1}{8}$. Patients with dyspeptic pains connected with motor insufficiency must take two of these powders an hour and half an hour before meals, and even half an hour and an hour after the same meal. Patients whose delayed evacuation is connected with pyloric spasm, produced or kept up by hypersecretion, take these powders during the whole of their digestion beginning an hour after the meal and continuing at intervals of an hour and a half until the next meal. This *modus operandi* is to be preferred to Mathieu's treatment. Mathieu gives a teaspoonful of the following :—℞. Sodii bicarbonatis, ʒss. magnesiæ ponderosæ, gr. 60. Bourget's mixture may also be prescribed ; it is a solution of 2 drachms of sodium bicarbonate, half a drachm of dried sodium phosphate, and half a drachm of sodium sulphate in 1,000 c.c. of water ; 150 to 200 c.c. to be taken the first thing in the morning as soon as the pain appears. It may be advisable to bring the solution of sodium bicarbonate to about 100° F. since it is well known that fluids the temperature of which closely approaches body heat are less irritating for the mucous membranes with which they come into contact. In spite of all this, and in spite of all the advantages of the alkaline treatment with bicarbonate of sodium, the remedy cannot be expected to work wonders even in the most favourable cases. A suitable dietetic treatment must by all means be prescribed at the same time. Even if this mode of treatment has to be prolonged as long as the pains persist, it is useless to reduce the dose as soon as the pains are less severe or less frequent ; in other words, this treatment must be started at the same time as the dietetic treatment, but it must in no case be prolonged after the dietetic treatment has been stopped.

NEW PREPARATIONS AND SCIENTIFIC INVENTIONS.

Some New "Tabloid" Brand Preparations.

1. "TABLOID" HYPODERMIC MORPHINE HYPOPHOSPHITE.—Messrs. Burroughs Wellcome & Co. have added to their list "Tabloid" Hypodermic Morphine Hypophosphite in products of four strengths—gr. $\frac{1}{4}$, gr. $\frac{1}{3}$, gr. $\frac{1}{2}$, gr. 1. Morphine Hypophosphite is a salt possessing qualities which render it particularly suitable for use in hypodermic medication when a concentrated solution is desired. It is perfectly stable, is practically neutral in reaction, and has the remarkable solubility of 1 in 3 of water. In clinical use its great solubility is a point of decided value, and it has been found to act well and promptly, without causing pain at the point of injection. The "Tabloid" Hypodermic Morphine Hypophosphite products are characterised by all the accuracy and elegance of finish which are associated with "Tabloid" products generally. The gr. $\frac{1}{4}$ and gr. $\frac{1}{3}$ strengths are issued in tubes of 20 and the gr. $\frac{1}{2}$ and gr. 1 strengths in tubes of 12.

2. "TABLOID" DIGITALIN (CRYSTALLINE) gr. $\frac{1}{250}$.—This product, issued by Messrs. Burroughs Wellcome & Co., contains crystalline digitalin, the most active of the glucosides obtained from digitalis leaves. This substance is official in the French Codex and corresponds to the German digitoxin. It is a much more potent preparation than amorphous digitalin, and has been known to produce beneficial effects when even comparatively large doses of the latter have failed. The indications for its use are the same as for digitalis. Owing to its great potency, its administration should be carefully watched. "Tabloid" Digitalin (Crystalline) presents the glucoside in convenient and accurately measured doses, thus facilitating exact regulation of the quantity administered. The preparation is issued in bottles of 50 tabloids.

"Tabloid" Brand Adjustable Head Dressing.

EVERYONE who has had to apply it, knows the disadvantages of the ordinary roller bandage as a means of fixing dressings on a head wound. It is difficult to put on and difficult to keep

in position. Of special interest and value, therefore, is the "Tabloid" adjustable head dressing, introduced by Messrs. Burroughs Wellcome & Co., which promises to abolish all troubles connected with bandaging the head. It consists of a cap to fit over the head, with a length of bandage attached for fixing the cap. A pad of double cyanide gauze is supplied along with the head dressing. This is applied to the wound (previously washed or otherwise treated), the cap is slipped over the head, the bandage portion passed round the back of the head, across the forehead and back to the starting point, where it is fastened with a safety pin, and the thing is done. The whole operation is exceedingly simple, and the result is excellent. The "Tabloid" head dressing does not slip or readily become displaced, and it causes the patient little or no inconvenience or discomfort. The "Tabloid" adjustable head dressing, with its accompanying pad of double cyanide gauze and safety pin, is issued in a package small enough to go in the waistcoat pocket, and well maintains the high reputation of "Tabloid" bandages and dressings for convenience, portability and practicability.

"Tabloid" Bismuth Gauze.

THE use as a surgical dressing of gauze impregnated with bismuth salts in place of iodoform is a practice with much to commend it, both from the practitioner's and from the patient's point of view. Such a dressing was introduced some time ago by Messrs. Burroughs Wellcome & Co. as one of the well-known "Tabloid" series of dressings, and has met with considerable success. As compared with the older iodoform gauze, it has the advantages of being quite odourless and non-toxic, while in antiseptic power it is in no way inferior. When used for packing cavities "Tabloid" Bismuth Gauze remains fresh and free from offensive odour for much longer periods than unmedicated gauze or iodoform gauze. "Tabloid" Bismuth Gauze is issued in various sizes and packings, the latest of these being that now under notice. It consists of a carton containing six yards of gauze, half-an-inch wide and with selvedge edges. The gauze is sterilised, and each carton is enclosed in a special covering which keeps it sterile. This size of "Tabloid" Bismuth Gauze will be of particular value in ear, throat and nose work.

In Memoriam.

PETER REDFERN, M.D., D.Sc., F.R.C.S. ENG., &c. ;
EMERITUS PROFESSOR OF ANATOMY AND PHYSIOLOGY,
QUEEN'S UNIVERSITY, BELFAST.

THE recent death of PROFESSOR REDFERN was received with deep and widespread sorrow throughout the North of Ireland, where for over half a century he was recognised as a man of great distinction, particularly in connection with the university life of the Province of Ulster. It occurred on December 22, 1912, at his country residence near Donaghadee after a few days' illness. On the 17th of that month he had quietly celebrated his ninety-first birthday, and in the evening of the same day caught a chill, which rapidly developed into broncho-pneumonia, from which he succumbed.

To review the life of DR. REDFERN would be, in the main, to record the progress of medical education in Belfast. This may be said to have really begun with the foundation of the Queen's College in 1847, though it is true that no provision was made in the College buildings first erected for the housing of what afterwards grew to be its largest faculty—namely, the Faculty of Medicine.

The first Professor of Anatomy in the Queen's College was Dr. Carlisle, who had previously been connected with the Park Street School of Medicine (later the Carmichael College) in Dublin. During his life time the teaching of anatomy was carried on, not in the college, but in a building near the centre of the town.

In 1860 Dr. Carlisle died and DR. PETER REDFERN, then Professor of Anatomy in King's College, Aberdeen, was chosen to be his successor. PROFESSOR REDFERN had already made his name in the world of medical science through his microscopic researches, particularly those into the mode of healing of wounds in cartilage. So much had

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his reputation spread, even at that date, that his candidature for the chair in Belfast was supported by testimonials from men of such world-wide eminence as Claude Bernard, Velpeau, Rokitansky, E. H. Weber, Bowman, Huxley, Sir Benjamin Brodie, Sharpey, Allen, Thomson, and his old teachers at Edinburgh—namely, Goodsir and Hughes Bennett.

DR. REDFERN was born at Chesterfield in Derbyshire in 1821, and when, as a young man, he decided to enter the medical profession, he was apprenticed to a local surgeon (Mr. Botham), as the custom then was, for five years. His master held, amongst other appointments, that of Medical Officer to the Chesterfield Union and Workhouse Infirmary. Here, during his apprenticeship, young REDFERN gave evidence of his progressive spirit by putting into practice, without Mr. Botham's knowledge, the operation for squint, not long previously introduced by Stromeyer. In consequence he incurred his master's displeasure, and left Chesterfield to continue his studies in Edinburgh. But Mr. Botham soon freely forgave him, and was proud to speak of him in after years as his distinguished pupil.

In Edinburgh, MR. REDFERN came under the influence and soon attracted the attention of two of the great teachers of the school at that period—namely, Goodsir and Hughes Bennett. As an undergraduate he carried off many prizes and in 1843 qualified by obtaining the membership of the Royal College of Surgeons of England. The following year he obtained the M.B. of London University, with a gold medal, proceeding in 1847 to the degree of M.D. at the examination for which he obtained the only honour awarded—namely, a gold medal. In 1851 he passed the examination for the Fellowship of the Royal College of Surgeons of England, and for some time before his death was its Senior Fellow. He was also the oldest medical graduate of London University.

Soon after graduating in London, DR. REDFERN, went to Aberdeen as Lecturer in Anatomy for the session 1845-46, but returned to Edinburgh at its close. The authorities at Aberdeen, however, were so much im-

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pressed by his teaching, and so highly appreciated his worth that they induced him to go back again the following year as Professor in the University, and here he remained till he was transferred to Belfast.

It was during his residence in Aberdeen that PROFESSOR REDFERN did most of his research work. This appeared as follows :—

In 1849 he published his series of papers “On Anormal Nutrition in Articular Cartilages.”

In 1850 “Experimental Researches on the Nature of the Changes which may be Induced by Operations on the Cartilages of the Lower Animals, &c.”

In this year also was published the above series of papers collected into one volume. In the same year appeared—a paper on “Anatomical Abnormalities” and another on “Cancerous Exudations.”

In 1851, “Remarks on a Case of Hydrophobia Occurring 28 days after the Bite of a Rabid Dog;” also “On the Healing of Wounds in Articular Cartilage.”

In 1852, “Mesmerism—Experiments and Inferences;” also a “Report on the Organic and other Solid Matters found by Microscopical Examination of Waters supplied from the Thames and other Sources.”

1854, at the British Association meeting in Liverpool, a paper “On the Nature of the Torbanehill and other Varieties of Coal.”

1857, at the British Association meeting in Dublin, two papers—one “On *Flustrella hispida* and its Development,” the other “On a Simple Method of Applying the Compound Microscope to Aquaria.”

1867, “Experiments on the Effects of Ozone” (with Professor Andrews in Belfast).

When DR. REDFERN came to Belfast the Medical School was well on its feet though suffering from the disadvantages previously mentioned. These, however, were soon removed, and new anatomical rooms provided in the grounds of the Queen’s College. The rooms first erected did not long suffice for the rapidly increasing numbers of students, and in 1865 were replaced by a block of commodious new buildings, which still form an

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important part of the Medical School, and contain the anatomical department. Within the short period of five years the students attending the anatomy classes had doubled, having grown from 78 to 156. Nor did the growth stop here: the fame of the teaching of DR. REDFERN and his distinguished colleagues continued to attract men till, in 1881-2, the numbers on the anatomy roll reached the high water-mark of 325.

It would be difficult to convey an adequate idea of the remarkable influence exerted by the personality and teaching of DR. REDFERN on the students who worked under him. Though strict in discipline, almost to the verge of severity, he enjoyed their highest esteem and respect. Many factors contributed to this, not the least being his almost unrivalled power of impressive teaching. He was not only exceedingly lucid in exposition, but he was an excellent draughtsman and possessed, to an exceptional degree, the gift of building up a diagram before his class, to illustrate a subject upon which he was lecturing. It has been said by one of his old pupils that in this respect "REDFERN was probably unequalled by any teacher of his time except Huxley."

The colleagues with whom DR. REDFERN was associated in the Queen's College, Belfast, and amongst whom he made his name, were a remarkably able set of men. They included Thomas Andrews, who at that time was working on the liquefaction of gases; Alexander Gordon, the surgeon; Wyville Thomson, the zoologist; and James Thomson (brother of Lord Kelvin), who was Professor of Engineering. On the Arts side the men were hardly less distinguished, amongst them being Craik, the author; Reichel, afterwards Bishop of Meath, and M'Cosh, who subsequently went to America and ultimately became President of Princeton, New Jersey, the university of which recently gave its chief to be President of the United States.

In 1893 PROFESSOR REDFERN resigned his chair, which was then divided, Professor Johnson Symington succeeding to the chair of anatomy and Professor W. H. Thompson, now of Trinity College, Dublin, to the chair

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of physiology. On his retirement his portrait was presented to the College by his old pupils and friends, a replica being at the same time given to Mrs. Redfern. Altogether DR. REDFERN taught anatomy for forty-eight years, and during that time held various examinerships—namely, in Aberdeen, Queen's University; London University; Royal University of Ireland. He also acted as Secretary to the Physiological Section of the British Association in 1859, and was President of the Section of Biology at the celebrated meeting of the Association in Belfast in 1874, made famous by the address of Professor Tyndall and by the contributions of Huxley in Biology. When the British Medical Association visited Belfast in 1884 PROFESSOR REDFERN was invited to give an address on physiology, which was crowded by his former students.

The honorary distinctions conferred on PROFESSOR REDFERN included the degree of D.Sc. from the Queen's University, the Honorary Fellowship of the Ulster Medical Society, Corresponding Membership of the Société de Biologie of Paris and Honorary Membership of the Académie Royale de Belgique.

In 1860 DR. REDFERN married Agnes M. Youngson, of Aberdeen, by whom he had a family of eight children—three sons and five daughters—all of whom survive. Mrs. Redfern, through her mother (née Burnett), was distantly related to the families of Joseph Black, the chemist, who discovered CO_2 in expired air, and of Sir Patrick Dun, the founder of Dun's Hospital in Dublin.

The evening of PROFESSOR REDFERN's life was spent at his country residence, Templepatrick House, near Donaghadee, where Mrs. Redfern still resides, and where he took the greatest pleasure in gardening and horticultural pursuits.

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PART I.

ORIGINAL COMMUNICATIONS.

ART. X.—*The Cæliac Affection*.^a By HENRY C. DRURY,
M.D. Dub.; F.R.C.P.I.; Physician to Sir Patrick
Dun's Hospital, Dublin.

IN September, 1912, a little girl, aged three and a half years, was sent from the country to Sir Patrick Dun's Hospital to be under my care. I was away for a holiday at the time, and my colleague, Dr. Watson, kindly looked after her till my return. The history we obtained was that for many weeks past she had been subject to attacks of diarrhœa, which resisted treatment and had been becoming more frequent, till it became almost constant. She had wasted greatly, and had become weak and listless. When I took over the case she had been in hospital about ten days. The diarrhœa, as such, had been checked, but she was far from well. There had been no febrile disturbances since her admission. She was thin, but not emaciated. Her face was plump, and the colour of her cheeks rather high, so that as she lay covered up in bed she looked very well. However, she lay quiet and apathetic, not speaking, nor playing with toys or with

^a Read before the Section of Medicine in the Royal Academy of Medicine in Ireland on Friday, February 28, 1913.

other children. We were told that previously she had been very bright and lively, and fond of singing to herself. She slept well, and ate everything given to her, and wanted more. She never vomited. The urine was healthy and normal in appearance. The lungs and heart were quite healthy. Her limbs, though not very thin, were flabby and soft. No tenderness was elicited anywhere. The abdomen was greatly distended. This appeared to be due entirely to flatulence. It was tense, but painless, and even deep palpation did not elicit any sign of discomfort. On some mornings the abdomen would be found much less distended, but even then palpation yielded no fresh information. No effusion was found at any time. The bowels moved three or four times in the twenty-four hours. This, and the character of the stools, arrested attention, and made me aware that I was dealing with something I had never met with before. Each motion was very copious—larger than one would expect for such a child as its single evacuation for the whole twenty-four hours. The motion was in appearance and consistence just like porridge, but whiter—the colour, in fact, of the china-clay stool of a person with complete obstruction to the flow of bile. The odour was quite unnatural and extremely disgusting. The motion was only slightly frothy, and that not always, but when passed a great deal of flatus was released with it. There was no obvious mucus to be seen in the stool unless an aperient had been given. Various changes of diet were tried, various mild purgatives were given, without producing the least change, except that usually after a purgative one motion would contain some, but not a great deal of, mucus. Salicylate of bismuth in 10 gr. doses, thrice daily, with an extra dose after a motion, had a decided effect in lessening the number of stools, making them more solid, reducing the fœtor, and lessening the distension of the abdomen; but as they blackened the faces one could not judge whether they were doing any further good. When stopped, as soon as the blackened faces ceased, there was

a yellowish colour seen in them for the first time ; but as the more correct treatment was just then found and adopted no further trial of that drug was made.

A motion was sent to the laboratory to see if any light could be thrown on the condition there. It was reported that there was no excess of fat, but we got no further help from that source. We had purposely stopped all fats except that derivable from milk. No blame is attributable to the laboratory authorities for the negative result of this examination, as we could not give them any indication as to what they were to report on, and did not expect them to set up a roving commission on the character of the fæces.

Week after week the child continued in much the same state, no better, no worse ; just maintained her weight or lost a few ounces ; lay quiet, apathetic, and uncomplaining, slept well and ate all she could get.

Meantime I had searched all the books I could lay hold of for a description of any similar condition, but without success. Mentioning the case briefly to my encyclopædic friend, Dr. Moorhead, he said he thought he remembered a similar disorder mentioned somewhere as “*coeliac disease*.” I renewed my hunt with increased hope, but with no increased success. Amongst those authorities consulted was my own edition of “*Osler’s Practice of Medicine*,” which I confess is rather old. Dr. Moorhead then helped me, and ran it to earth in one of the more recent editions of Osler. The following is the brief reference there found :—

“*The Cœliac Affection*.—Under this heading Gee has described an intestinal disorder, most commonly met with in children between the ages of one and five, characterised by the occurrence of pale, loose stools, not unlike gruel or oatmeal porridge. They are bulky, not watery, yeasty, frothy, and extremely offensive. The affection has received various names, such as *diarrhœa alba* or *diarrhœa chylosa*. It is not associated with tuberculosis or other hereditary disease. It begins insidiously, and there are

progressive wasting, weakness, and pallor. The belly becomes doughy and inelastic. There is often flatulency. Fever is usually absent. The disease is lingering, and a fatal termination is common. So far nothing is known of the pathology of the disease. Ulceration of the intestine has been met with, but it is not constant."

To this concise and graphic account there is little to be added, but the prognosis suggested was distinctly discouraging, and treatment nil. It exactly fitted my case.

Dr. Moorhead also said that he thought he remembered Dr. Finny speaking of, or lecturing about, such a case. I forthwith went to Dr. Finny, and again found the information quite correct. Dr. Finny very kindly gave me every assistance, describing his case, and going fully into the treatment successfully used by him, and afterwards adopted with like success by me. He further told me I would find all about it in Eustace Smith's "Diseases of Children." As I had this in my own bookshelves, and had searched it, I felt rather humbled, but with his help I located it in the chapter on "Inflammatory Diarrhœa," under the sub-head "The *chronic form* of intestinal catarrh." There, however, he is somewhat discursive, and I do not think he had recognised this condition as a special entity. All the symptoms that I have mentioned are given, but also a great many more which we are familiar with in other forms of intestinal disorder. Neither is his treatment as explicit as that given by Dr. Finny, and as laid down by Gee. With this, however, I had to be content, as I had not yet found Gee's article, nor did I till much later.

Gee's original description of this interesting disorder will be found in "St. Bartholomew's Hospital Reports," Vol. 24, 1888, page 17. He there calls it "The Cœliac Affection," and his account agrees in all essential points with that of the case I have related, which was written before I had seen his paper. He tells us that it is sometimes met with in adults who have returned from India—there the name "diarrhœa alba" is applied to it—but it

is seldom met with in adults who have never left this country. It is sometimes called "*diarrhœa chylosa*," which seems to mean that the *fæces* consist of chyle unabsorbed—there is no support for this idea. It is one of the several diseases popularly called "consumption of the bowels," from the fact that the tendency is for the patient to gradually waste away.

The cause is most obscure—strong, healthy children are attacked just as often as the weakly. Errors of diet can hardly suffice to explain it, else why should one child in a family of several—all brought up the same way—be alone attacked? "Naked eye examination of dead bodies," he says, "throws no light on the nature of the *cœliac* affection, nothing unnatural can be seen in the stomach, intestine, or other digestive organs."

"The patient wastes more in the limbs than in the face, which often remains plump until death is nigh. In the limbs emaciation is more apparent to hand than eye, the flesh feeling soft and flabby." This was certainly so in my case. He tells us that during recovery "a peculiar weakness of the legs remains long after all other tokens of the disease have passed away which shows itself in that the child is unable to jump." "The course of the disease is always slow—whether the patient live or die he lingers on for months or years." "While the disease is active, children cease to grow; even when it tends slowly to recovery they are left frail and stunted."

The treatment, in a word, is—stop all milk and carbohydrate food, and feed entirely on raw meat and meat extracts. Within two or three days of the adoption of this line of treatment the stools began to assume the ordinary colour; they were smaller in quantity and number, but were even more offensive than before. This, however, gradually subsided. The abdomen, too, became less and less distended, and finally quite normal in appearance. The child's general condition remained just the same—dull, apathetic, silent, taking no interest in anything, and not gaining in weight. After some weeks of

this, but no further progress, we tried to add some carbohydrate to her diet, and began with one teaspoonful of a malted starchy food, daily; this agreed quite well, and was continued for a week; then a teaspoonful twice a day was given, but immediately there was a slight febrile disturbance and free diarrhœa. The malted food was at once stopped, though we were not sure whether it was the cause of the disturbance or not. Later, the teaspoonful was again given and continued; then a little more toast, without bad result, and with this we were content for a long time. Under this she began to put up weight, to show more life, beginning to talk, sing, play with toys and other children, and so went on till she became quite normal in these respects. A little milk was tried, but at once she got diarrhœa with mucus in stools, and it was stopped. It seems evident that a very prolonged abstinence from milk and excess of carbohydrate food will be necessary before a complete and permanent cure is accomplished.

The dietary in this case consisted daily, during the first fortnight, of a few very thin pieces of toast, with 4 oz. of finely-shredded lean meat or fish, with beef tea, chicken broth, water. The meat was gradually increased to 8 oz. and then 12 oz. Sometimes, for variety, some red currant jelly was given with the meat. Later the meat was lightly cooked, and later still more fully cooked. The toast was given throughout chiefly as a medium for administering the meat. There was no trouble at all in getting the child to take this diet, and though previously she ate much more, she seemed just as satisfied with the greatly reduced bulk of the new diet. The chief difficulty seems to be to get the patient gradually on to ordinary diet and to know when to begin to try to do this. One can only experiment, watching very carefully, and being ready to stop at once anything that seems to disagree. She seemed to remain *in statu quo* as long as she was on the purely meat diet, but when we began to slowly increase her carbohydrate food she gradually began to enliven up and

very slowly to put on weight. She left quite well, having put on over one stone in weight. Her parents being warned of the possibility of tape-worm in the future.

Gee is very definite as to treatment. He says :—" To regulate the food is the main part of treatment. Cow's milk . . . is not only not suited for children suffering from that disease, but is the least suited kind of food for them. Nothing more certain than that cœliac children cannot digest the hard curd of ruminants' milk. . . . The allowance of farinaceous food must be small. . . . Malted food is better, also rusks or bread cut thin and well toasted on both sides. No kind of fruit or vegetables may be given, except a tablespoonful of well-boiled, mealy potatoes, mashed or rubbed through a sieve. Mutton and beef, raw or very under-done, pounded and rubbed through a wire sieve, should be given at the rate of four to six tablespoonfuls daily. . . . For drugs, carbonate of bismuth and aromatic chalk powder may be prescribed; also a small dose of compound decoction of aloes now and then. But if the patient can be cured at all it must be by means of diet."

In an old work—" The Study of Medicine," in 5 vols., by John Mason Good, M.D., F.R.S., 1825—the author says :—" The disease of the digestive function form the first class in the nosological system about to be unfolded, and to these, from the Greek term *κοιλία*, "alvus," "venter," or "the lower belly," I have applied the classic name of cœliaca." This would appear to be the origin of Gee's name for the disorder.

I regret that I have nothing original to offer in this communication. I have no theory even to suggest as to the origin or nature of the affection. I made no improvement on the treatment recommended by Dr. Finny, nor does it seem to require any. From my observation it would appear that milk has a more prejudicial effect than other forms of diet, why I cannot conceive, and am not at all positive that the observation is correct. Eustace

Smith, however, mentions it as something to be specially avoided, and Dr. Finny also warned me against it. Gee is positive.

Often I have met with children suffering from mild gastro-intestinal derangement, but without any trace of jaundice, in which for a few days—never, I think, exceeding seven—the motions were white and offensive. But these cases recovered by ordinary simple means in the short time mentioned, and without extra trouble. Never before had I seen a case presenting the features of the one I have related, so I considered it was worthy of bringing it under your notice, especially as the prognosis seems to be bad unless the correct treatment is adopted, and the treatment when adopted appears to be eminently satisfactory.

ART. XI.—*Some Remarks on the Tuberculin Treatment of Pulmonary Tuberculosis.*^a By G. B. DIXON, M.R.C.S., L.R.C.P., L.S.A.; Principal Sanatorium and Tuberculosis Officer to the Birmingham Public Health Department.

GENERAL CONSIDERATIONS AND INDICATIONS.

To those who have not yet used tuberculin I would like to say that it must not be regarded as a sovereign remedy for every case of pulmonary tuberculosis. It can no more claim to produce arrest in every case of the disease than can any other specific therapeutic agent; it has its limitations—a fact, I think which is realised and admitted by those who have used it extensively—irrational enthusiasm or biased optimism on this point as upon most others will usually lead to disappointment and discredit. Patients whose disease is so advanced and acute, and whose resistance is so feeble that they are beyond the help of other forms of treatment are usually beyond

^a Read before the Derby Medical Society, February 28, 1913.

the reach of tuberculin also. It is incapable of producing obliteration of extensive cavities, it cannot cause expansion of a contracted fibrosed lung, nor can it completely reduce a chronically thickened and adherent pleura, but in many cases presenting such physical signs it is possible by its careful administration to raise the immunity to such a level that the advance of the disease is materially checked, and the prognosis as regards the duration of life considerably altered.

The stethoscope alone is a "broken reed" upon which to lean in making a prognosis in any case of pulmonary tuberculosis, and it is, if possible, a more fallacious guide when taken alone as a means of deciding in any given case whether tuberculin should be used or not, and whether we depend upon any pathological classification of the disease into various stages, or upon the presence or absence of any particular set of symptoms as a means of deciding whether tuberculin should be administered we will frequently find ourselves at fault.

In forming an opinion as to whether tuberculin is indicated, a broader view may well be taken than many text-books would lead us to suppose is safe, but our chief guide in all cases must be the measure of the patient's resisting power to his disease as determined by a careful consideration of the temperature, the state of the circulatory and digestive systems, and his general condition; if these are satisfactory tuberculin can generally be used with advantage. It would be unwise to administer tuberculin to a patient with diabetes, lardaceous disease, ill-compensated valvular disease of the heart (which in connection with pulmonary tuberculosis is not so rare as is often stated), acute exophthalmic goitre with rapid pulse, chorea, or syphilis, for which specific treatment has not been received. Hæmoptysis and pleurisy are not contra-indications, rather should they be regarded as urgent indications. Tuberculin should not be administered during the acute stage of a pleurisy nor whilst hæmoptysis is in progress, but when the temperature has

reached its previous average normal and when the sputum has been clear for fourteen or sixteen days it may be used. In this connection I do not regard spots and streaks or tinges of blood as hæmoptysis. Pregnancy is no contra-indication to tuberculin administration. Patients in this state usually take it well and they should be placed under treatment as soon as possible in order that the highest degree of immunisation attainable may be reached before parturition. Mixed infections as determined solely by a microscopical examination of the sputum should on no account be regarded as a contra-indication. The administration of tuberculin must never be regarded as a sufficient reason for the exclusion of other forms of treatment, and if the best results are to be obtained full use as far as possible must be made of dietetic and hygienic measures, and of any drugs which are indicated.

As a rule menstruation need not be considered in connection with the administration of tuberculin. It is well however to remember that a premenstrual rise of temperature in many tuberculous subjects is a real thing, and frequently occurs. There is also evidence to show that in some cases a premenstrual rise of blood-pressure occurs, and if these are present in a patient who is subject to hæmoptysis it is well to arrange the time for injection so that it does not fall immediately before the onset of menstruation.

Before proceeding to the administration of tuberculin the practitioner must carefully examine his patient; an analysis of the urine is necessary, the temperature should be carefully recorded for some days, and where possible the pulse rate also. An examination of the sputum when present is always advisable. The period of time for which it is necessary to keep a patient under close observation prior to tuberculin administration will of course vary and will be longer in the case of an out-patient than in that of an in-patient. If the temperature is recorded three times in the twenty-four hours that will usually suffice—

eight, four, and eight o'clock are good times : tuberculous patients will usually attain their highest temperatures at four p.m. As a rule tuberculin is contraindicated if the temperature is above 100° F. at 4 p.m. If the temperature is taken by the mouth the instrument must be retained beneath the tongue for no less than ten minutes ; this is necessary even if the thermometer be a thirty-second one with a Kew certificate. It is well to remember that it is the mouth and not the thermometer which requires the ten minutes. If these precautions are strictly observed rectal records are not required.

Rectal readings although undoubtedly more accurate than mouth readings are subject to such marked variations as the result of the slightest muscular exertion that they are apt to be very disconcerting to those who are unaccustomed to work by them. In institutions not provided with separate cubicles, and for the out-patient who is following his occupation rectal temperature records are out of the question, and I think it possible that there may be some foundation for the suggestion that the occurrence of ischio-rectal abscess is more frequent amongst those who record their temperature in this way than amongst those who use the mouth.

TUBERCULIN AS A DIAGNOSTIC AGENT.

As a diagnostic agent tuberculin is used in several different ways, the ophthalmic method or (Calmette's) has fallen into disrepute as it occasionally leads to recurring inflammations in the eye.

Morro's or the percutaneous method is probably the least reliable of all.

Von Pirquet's and the subcutaneous method of Koch are the two most in vogue at present. Of these von Pirquet's is the one which can be most conveniently carried out, but unfortunately only vague information is derived from a positive von Pirquet, it merely proves that at one time or another the person reacting has been

infected by tubercle bacilli—a fact of small value in our effort to make a definite diagnosis as to the organ affected.

Von Pirquet's test is simply applied and gives rise to no discomfort. A finer test is obtained if a 10 or 20 per cent. solution of old tuberculin is used in preference to the pure tuberculin generally advocated. Bovine tuberculin may also be used for this test. A positive re-action usually occurs within from 18–48 hours and consists of hyperæmia and exudation in the form of a papule which varies in extent. The site usually chosen for scarification when doing a von Pirquet's test is the inner side of the forearm. I have noticed that apparently the more recent the tuberculous infection the more marked are the hyperæmia and surrounding exudation, and the earlier does the reaction appear, the more extensive and long-standing the lesion the less well-marked are the hyperæmia and exudation, and the longer is the reaction in occurring. The great drawback to the use of von Pirquet's test is that it gives no information as to the locality of the lesion, nor does it tell us whether the lesion is active or quiescent. It is a well proved fact that patients in an advanced stage of tuberculosis and also those who have undergone a course of tuberculin injections do not always give a positive reaction to this test.

The attempt which has been made by some Continental workers to derive quantitative information as to the extent of infection present by observing the smallest dilution of old tuberculin which will give a reaction at present seems to be founded upon too imperfect evidence to be useful clinically, the personal element of each individual patient being a very variable quantity. It has also to be remembered in this connection that both very recent and very long-standing infections may give no response.

The subcutaneous method of Koch is by far the most useful method of using tuberculin diagnostically. Before applying this test a record of the patient's temperature should be kept for six days, on each of which the tem-

perature has been taken at least three times, and to carry out the test without risk it should not be used if the temperature shows a rise of more than one degree. The pulse rate should be recorded also. For an ordinary adult an initial dose of .001 c.c. of old tuberculin is injected ; if the patient is weakly or under fourteen years of age .0002 c.c. may be used ; a four-hourly record of the temperature and a record of the pulse rate are taken for forty-eight hours if there is no reaction, then a dose of .005 c.c. is given. If no reaction occurs after a further expiration of forty-eight hours another dose of .01 c.c. is given and if the patient does not react to this it is unnecessary to treat him. In the case of weakly adults or children, when the initial dose has been .0002 c.c., the subsequent doses should be .001 c.c. and .005 c.c. A rise of temperature equal to $.5^{\circ}$ F. should be followed by a repetition of the last dose and a rise of 1° F. is considered as a positive reaction.

Reactions occurring after the injection of tuberculin whether it is being used for the purpose of diagnosis or of treatment may be classified as "general," "local," and "focal." A "general reaction" may include a rise of temperature, and increase of pulse rate, headache, malaise, abdominal and joint pains, sweating and diarrhoea. A "local reaction" is shown by pain, swelling, induration and redness about the site of injection. A "focal reaction" is indicated by an increase of pre-existing physical signs, increase of cough and expectoration already present, or the presence of slight cough and expectoration where none existed previously, the presence of tubercle bacilli in sputum which formerly gave a negative microscopic result, or a sense of pain or constriction in the chest with or without dyspnoea.

It is this possibility of producing a "focal" reaction which makes the subcutaneous method of testing such an excellent one, and which places it so far in advance of other methods. The occurrence of a "*focal*" reaction in any case gives us definite assurance that we are dealing

with a case of pulmonary tuberculosis. A positive Calmette, von Pirquet, or Morro alone can never justify us in making a definite diagnosis of pulmonary tuberculosis, nor can the occurrence of a "local" or "general" reaction after the subcutaneous test, but the presence of a "*focal*" reaction is evidence upon which the most exacting observer is justified in making a diagnosis of pulmonary tuberculosis.

It is inadvisable to use the subcutaneous method of testing in any case where there has been a recent attack of hæmoptysis.

REACTIONS.

After injections of tuberculin used as a method of treatment reactions must sometimes occur, they should not be considered as contra-indications to the treatment, and injections must be persevered with.

A reaction usually occurs in from 12-48 hours after the injection. A rigor and a rise of temperature occurring within an hour or two of the injection may mean that the injection has been made into a blood-vessel. As the result of a reaction the temperature usually shoots up, a temperature rising gradually step by step with remissions is not as a rule the result of a reaction. When a "*focal*" reaction occurs physical signs may only then be audible in the lungs and bacilli may be present for the first time in the sputum. No patient will pass through a course of tuberculin treatment without some period of greater or lesser sensitiveness as indicated by reactions. Violent reactions are always to be avoided as far as possible. It would be difficult to attempt to give any satisfactory account of the theories advanced in explanation of these occurrences but reference to the various text-books will provide you with a variety of theories. If a reaction occurs as indicated by any of the above phenomena the practitioner may adopt different courses. The interval before the next dose may be extended and the dose may be repeated, diminished, or increased slightly.

Personally I think it wiser to diminish or repeat a dose in preference to increasing it, and I think it is better not to give the next dose until the temperature has returned to its previous average or near it. After several decided reactions it is well to make the increase in the doses small for the next few injections. For practical purposes reactions may mean that too large doses are being given, and the increases must be smaller, or that longer intervals between the doses are required. It may also mean that an unsuitable preparation of tuberculin is being used or that the patient is very sensitive. If repeated "reactions" occur at the very beginning of treatment it is well to allow a period of 12-15 days to elapse and to recommence with a much smaller dose and to increase the doses much more gradually than previously. If this does not prevent "reactions" it is well to try the effect of a different preparation of tuberculin, preferably one of the albumose-free preparations.

TUBERCULIN AS A THERAPEUTIC AGENT.

In considering tuberculin as a therapeutic agent it is well to remember that it may be used for two distinct classes of patients—viz., those in whom the disease is not too advanced and whose resistance is good, and in whom there is a reasonable prospect of producing "arrest," in such cases every attempt must be made to reach the maximal dose. The other class includes those in whom the disease is advanced, whose resistance is not so good, and for whom complete arrest is improbable. In such cases it is not always possible to reach the maximal dose of any given preparation, but if a short course of tuberculin is given from time to time the patient's immunity can be raised to such an extent and his condition be so improved that the prognosis is materially altered, and the improvement and relief which can be obtained by these short courses of tuberculin injections given at intervals is frequently more striking than the improvement obtained amongst patients whose pulmonary condition is better.

Of the different methods of administering tuberculin as a form of treatment for pulmonary tuberculosis it will be found that the "intensive method," which aims at the attainment of a large dose by gradually increasing doses at short intervals is the best. At the commencement of this method of treatment the injections can be given at two-day intervals until fairly large doses are being reached, after this intervals of four, six, eight, or ten days may be required. The prolongation of the interval between the doses is largely an individual matter upon which each case must be separately judged. If a patient gets no reactions by having bi-weekly injections then it is often unnecessary to increase the interval. In some cases it is possible to reach large doses at three-day intervals even when the preparation used is old tuberculin. This course can be more easily pursued when the patient is under strict supervision in an institution or his own home than when he is following his occupation and visiting his doctor. It is sometimes stated that there is no advantage to be gained by proceeding to such massive doses as 1 c.c. The advocates of this view have argued that the patient derives as much benefit from .001 c.c. as from 1 c.c. I think it is only reasonable to assume however, that the larger amount of tuberculin and the longer period of time over which it acts will ultimately lead to a greater production of antibodies and to a higher degree of immunity. This seems to be a not improbable explanation of the fact that a dispensary patient who is following his occupation and who is receiving no treatment other than the tuberculin injections will be found with crepitations or other adventitious sounds when his dose is .001 c.c., which are absent when a dose of 1 c.c. has been reached. In every case therefore where the "intensive method" is being used an attempt should be made to reach the maximal dose. From the patient this may claim the exercise of great perseverance, from the physician much patience; intervals may have to be increased, doses repeated or diminished until sensitiveness is overcome, and the pro-

cedure is once more one of gradual increase and progress. I know it is impossible with some patients to proceed to the maximal dose on account of an unusual hypersensitiveness. This type of patient is fortunately not very numerous. Some of the text-books state that if a large amount of pure tuberculin is injected into the tissues it gives rise to local irritation and we are advised to dilute the larger doses. This is quite contrary to experience and one finds that local irritation is most likely to occur in the early days of treatment when the solution is quite dilute. The explanation may be that when large doses are reached a high degree of tolerance has been produced. In mixing the dilutions of tuberculin a suitable diluent is .25 per cent. carbolic acid in normal saline with a little glycerine. Dilutions do not as a rule keep well for more than four days. Injections should when possible be given in the early part of the forenoon; if this is done there is less chance of slight reactions being overlooked than is the case when injections are given in the afternoon. There is no advantage to be gained by attempts to get the patient through a course of tuberculin treatment quickly; any such attempt may in fact be attended with serious risks particularly with hæmorrhage cases, and will most certainly produce severe reactions. If in the out-patient department severe reactions are repeatedly produced and the patient has to lose a day's work in consequence he will very quickly cease his attendances. The increase of dosage will vary for each different patient and it will vary also at the different stages of treatment. The first few doses may frequently be doubled; after this an increase of one-half, one-third, one-fourth, or even one-fifth may be all that can be accomplished. To put a patient through a satisfactory course of tuberculin so that he terminates his period of treatment with three separate doses of 1 c.c. of old tuberculin without reaction will take on an average eight or eight and a half months if a sequence of two or three different preparations is adopted. In making such an estimate I am speaking of those who are being treated

as out-patients. I have read and heard it stated that six months is a fair average for such treatment but if this is attempted I fear that your patient will lose at least one day's work or more each week on account of severe reactions and if this happens one of the chief claims of the out-patient treatment will be defeated—viz., that work and treatment can be concurrent. Of abscesses or other troubles as a result of tuberculin injections I have seen nothing, and this is not from treating a small number of patients as during the year there have been 20,500 attendances at the dispensary.

CHOICE OF PREPARATIONS OF TUBERCULIN.

In the choice of a preparation of tuberculin for purposes of treatment in any given case it seems to be a debatable point even if the variety of infection is clear, whether a human or bovine variety will give better results. Immunity can apparently be produced by either equally well. It has been suggested that T.R. gives better results than the others when there is a tendency to get a high temperature in any case. B.E. is said to have the power of decidedly reducing the number of bacilli in the sputum. Apart from these two points which seem to have some foundation I do not think that there is any special claim for the superiority of one preparation over another. B.E., however is certainly difficult of absorption—a fact which should always be remembered, as it occasionally happens that a second dose is given before the first is absorbed, and the result is an exceedingly smart reaction.

Tuberculins can be classified as “exotoxic” and “endotoxic” preparations: the old tuberculins and the bouillon filtrates (T., P.T., P.T.O., and T.O.A.) are exotoxic, whilst the “new” tuberculins (T.R., B.E., and P.B.E.) are endotoxic.

It is considered good practice by some to use exotoxic preparations for patients who are suffering mostly from toxæmia, in whom the physical signs are slight; in sub-acute and chronic cases with more extensive physical

signs and with but little toxæmia the best results are said to be obtained from the use of endotoxic preparations. Personally I think when possible it is advisable to use a sequence of preparations in which both endotoxic and exotoxic preparations are included, and when exotoxic preparations only are used if bacilli still persist in the sputum a final course of treatment with an endotoxic preparation should generally be undertaken.

It is stated that the physical signs in the lungs are most influenced by the administration of endotoxic preparations. I cannot say that my experience coincides.

Useful sequences are the—(1) P.T.O., P.T., and O.T. ; (2) B.E. and O.T., or P.T.O., B.E., and O.T.

When the first sequence is used, P.T.O. may be commenced at .0005, and continued up to .5 c.c. P.T. may then be commenced at .01 c.c. and carried up to 1 c.c., after which .1 c.c. of O.T. is given and increased up to 1 c.c.

When B.E. and O.T. are used, B.E. may be given in an initial dose of .0001 or .00005, and continued up to 1 c.c., when .1 O.T. may be given and increased until 1 c.c. O.T. has been taken three times without reaction.

In using the third sequence, P.T.O. is given up to 1 c.c., then B.E. is commenced at .005 c.c. and carried up to 1 c.c., after which .1 c.c. O.T. may be commenced and increased to 1 c.c.

As a site for the injection of tuberculin I have found that the interscapular region is to be preferred to the back of the upper arm as in the former region induration is less likely to occur. The injection should be given between the cutis and the fascia ; if it is given too superficially it produces pain, swelling, and redness, a condition very difficult to distinguish from a local reaction. Previous to the injection the skin should be wiped over with alcohol or ether. It is usually unnecessary to place anything over the puncture. The syringes and needles for tuberculin injections should be carefully boiled, and can then be kept under alcohol : a 1 c.c. syringe graduated to twentieths and numbered to tenths is a useful one to use.

CONCLUSIONS.

To obtain the best results from tuberculin injections every attempt should be made to reach the maximal dose of the preparation which is being used, and if this is done it will usually be shown that the patient's immunity has been raised and that he is in a much better position than he previously was to withstand fresh infection, as evidenced by the absence of relapses ; for how long this high level of immunity can be maintained is a point which it is very difficult to determine. After a full course of tuberculin injections, any recurrence of symptoms or any increase in or reappearance of physical signs should be an immediate indication for the continuance of injections. If this course were more universally adopted many patients would be saved from those acute phases which so frequently occur in the course of pulmonary tuberculosis, and one of which so frequently terminates fatally. Small doses of tuberculin administered for a short period of time are usually worse than useless unless such a course of treatment is secondary to a previous full course, or unless it is to be repeated.

I would ask you again to remember that tuberculin is powerless to alter gross lesions in the lungs, so in marked cases of the disease do not judge your results by the change produced in the physical signs.

When we see a diminution or complete cessation of cough and sputum, a discontinuance of hæmoptysis and night sweats, an increase of weight, a feeling of vigour, and the ability to follow an occupation in patients who for months have been acutely ill, or who for even a year or more have been chronic invalids, when you see this after a course of treatment by tuberculin in patients who have not been removed from their home conditions, and where no single drug has been given, and where dietetic treatment has not been emphasised, then I say it is difficult to ascribe the result to anything but a raised immunity following the injections of tuberculin.

We are told by critics that these results occur naturally,

PLATE XIII.

MR. W. I. DE COURCY WHEELER ON "*Tubercular Disease
of the Femur.*"



FIG. 1.



FIG. 2.

Two specimens (actual size) of the lower end of the femur removed by operation. Note the new "bark" like bone formed as a result of osteoplastic periostitis. The thickening felt clinically is thus accounted for.

but the percentage of such results is greater when tuberculin has been used, so it cannot always be regarded as a "natural recovery." Others again say that the "*spes phthisica*" is responsible for much that tuberculin claims; if this is so then all I have to say is that it would be madness not to use tuberculin if it can generate a "*spes phthisica*" capable of producing such results.

ART. XII.—*Three Cases of Tubercular Disease of the Lower End of the Femur, illustrating some Points in Pathology and Treatment.*^a By W. I. DE COURCY WHEELER, M.D., F.R.C.S.I.; Surgeon, Mercer's Hospital; Dublin. (Illustrated.)

RECENT publications on the subject of tubercular disease of the bones and joints in children, more particularly in relation to the work of Stiles, have thrown light on a subject which heretofore has been in a mire of confusion. Little knowledge could be derived from the involved descriptions, complicated nomenclature, and inaccurate pathology which marred the descriptions in the majority of text-books dealing with osseous tuberculosis.

In this communication I propose to concentrate attention on three recent cases of tubercular disease of the juxta-epiphyseal (metaphysis) portion of the lower end of the femur. The disease commences and progresses along definite anatomical and pathological lines in a corresponding position in all bones.

Pathology.—It may be stated as an axiom that the great majority of cases of osseous tuberculosis owe their origin to infection from contaminated milk, and until this source of infection is recognised and dealt with by the public there will be no diminution of the stream of children suffering from the disease which seeks admission to the hospitals. In a typical case the tubercle bacilli can be traced from the milk to the metaphysis of the bones. Possibly the child

^a Read before the Section of Surgery in the Royal Academy of Medicine in Ireland, and the three cases shown after operation, on January 10th, 1913. [For the discussion on this paper see page 282.]

suffers from adenoids or enlarged tonsils, the cervical, bronchial, or mesenteric glands become involved. The bacilli are, in the first case, carried through tributaries of the jugular vein into the pulmonary circulation.

Reaching the systemic circulation, the survivors of phagocytosis and endothelial activity are deposited in the metaphysis of bones, to remain latent or to set up active disease. The reason for the lodgment of tubercular emboli in this situation is an anatomical one.

Three sets of capillaries anastomose in the metaphysis of bones :—

1. The end branches of the nutrient artery (diaphyseal group).

2. Branches from the arteries supplying the joint entering the metaphysis (metaphyseal group).

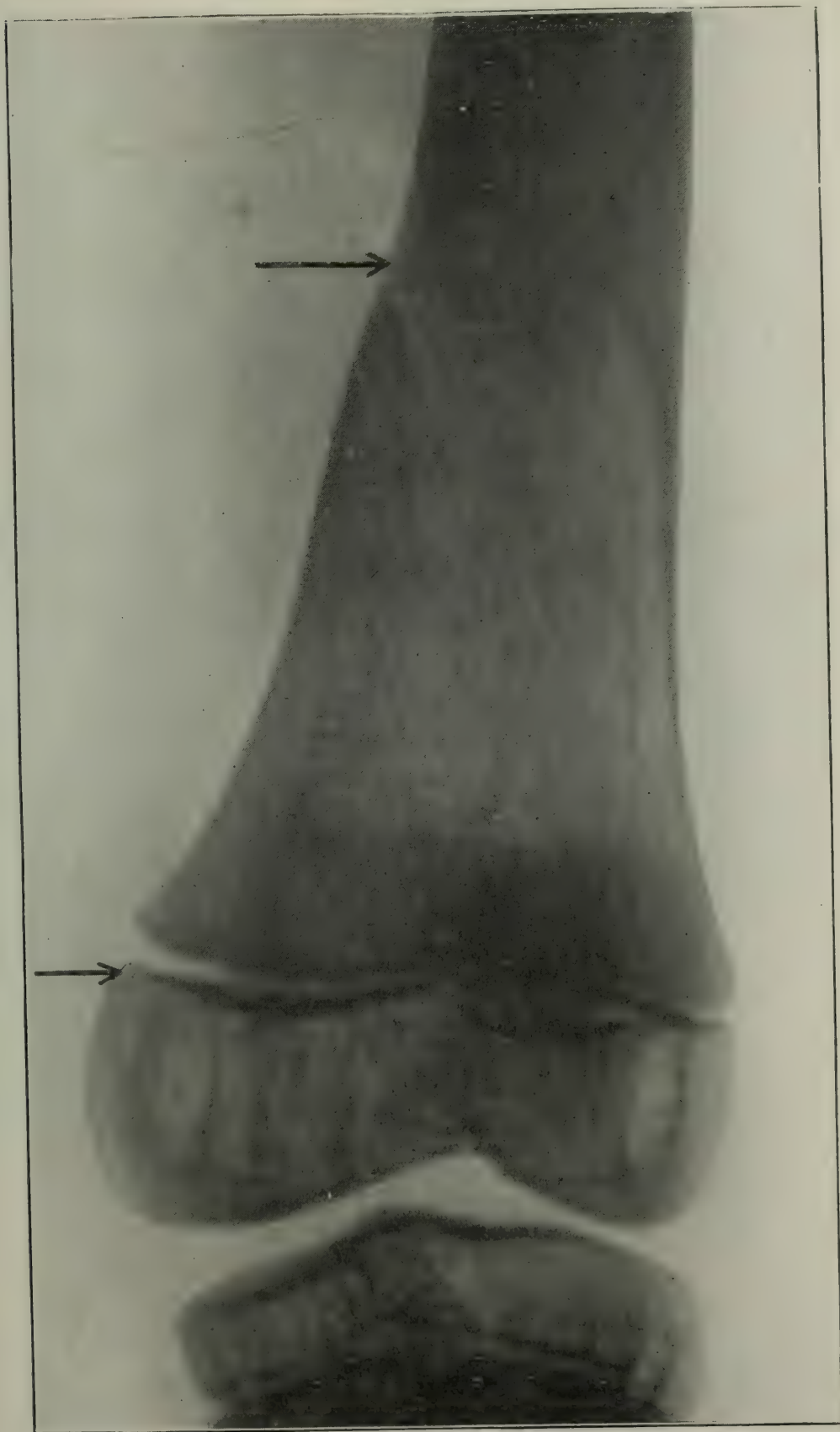
3. Branches from the same source as 2 supplying the epiphysis (epiphyseal group) perforate the cartilage and anastomose with the diaphyseal and metaphyseal vessels.

The circulation through the cancellous spaces of the bone is slow, and this fact, combined with the free capillary anastomosis, makes it obvious why the site is a favourable one for the deposit of a tuberculous embolus.

A slight injury, breaking down some of the trabeculae of the cancellous spaces may determine the onset (by setting free the embolus) of active tuberculosis.

Once established, the disease is at first frequently central, and subsequently is carried by the Haversian systems through the compact bone to the periosteum. An osteoplastic periostitis ensues, and a thin layer of new bone, very porous, and delicate, is laid down between the thickened periosteum and compact bone. Finally, as caseation and liquefaction proceed, an abscess forms in the soft tissues, and is followed by a sinus leading down to diseased bone.

The formation of the thin layer of porous bone, coupled with the presence of thickened periosteum, is responsible for the very important clinical sign seen early in these cases—viz., thickening. (Plate XIII., Figs. 1 and 2). Tubercular disease may arise in the epiphysis or in the



Recent X-ray of case operated on in 1909. The lower third of the shaft of the femur was removed (between the arrows) and was accurately reformed as shown. Functional result perfect.

diaphysis, but for the reasons given, not nearly so commonly as in the situation just described. Furthermore, it is impossible to have a tubercular epiphysitis unless centres of ossification have already appeared in the cartilage. For example (with the exception of the epicondyle) the inner side of the epiphysis of the lower end of the humerus could not be diseased in a child under eleven years, nor could the outer side be effected until the child had reached the age of two. On the other hand, the upper and lower epiphyses of the femur (but not nearly so frequently as the metaphysis), owing to early appearance of ossific centres, may readily be the site of tubercular disease.

The relation which tubercular metaphysitis bears to disease of the neighbouring joints is very definite.

Thus, in the hip-joint, the metaphysis or juxta-epiphyseal portion of the neck is the first portion of the joint to be involved. But here the metaphysis is entirely enclosed within the capsule, and the joint cavity can scarcely escape rapid infection from direct extension.

On the other hand, the metaphysis of the lower end of the femur is not enclosed within the joint cavity of the knee, and is separated from it by a large epiphysis. In this situation the joint is not, as a rule, involved in the customary manner, the primary focus being either synovial or epiphyseal. What has been said of the knee-joint applies equally to the case of the shoulder-joint.

The three cases which I mention below, however, demonstrate that tubercular metaphysitis of the lower end of the femur is no less common than in other situations. The disease progresses along the lines of least resistance, through the thin trigone of the femur, presenting as a popliteal abscess above and behind the knee-joint.

In the elbow-joint the metaphyses of all three bones are within the joint cavity, and, as in the hip-joint, tubercular metaphysitis is followed very rapidly by general joint infection.

Diagnosis.—There is little to be said concerning the diagnosis of central tuberculosis of the metaphysis in children. The only early diagnostic sign is thickening of the

bone in the region of the epiphysis. Occasionally a similar condition is present in cases of congenital syphilis. In every case an *x-ray* photograph must be taken to demonstrate the tubercular focus and to estimate the extent of operation necessary for its treatment.

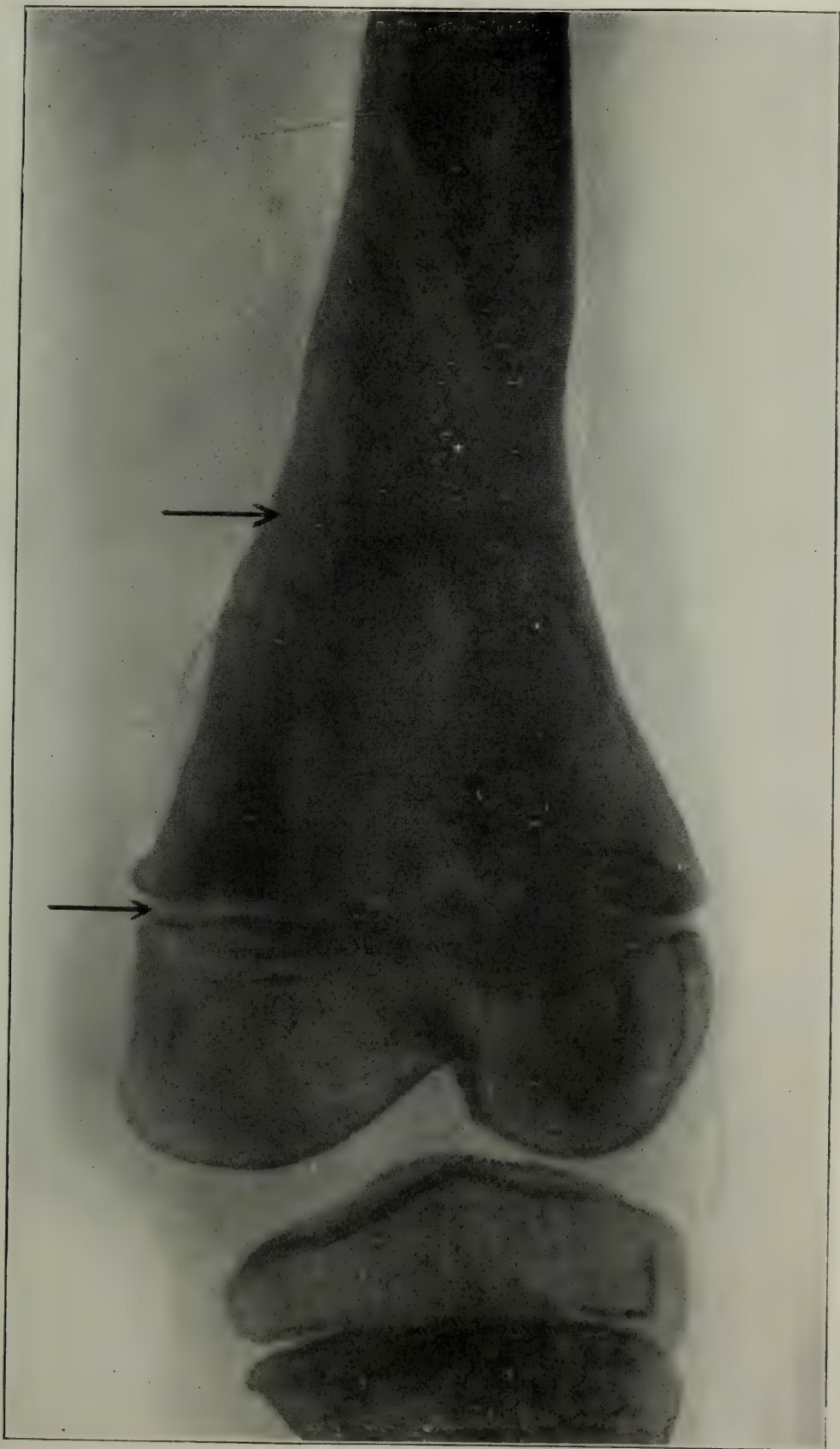
Treatment.—It is only necessary to dwell in this paper on the line of treatment adopted in the three illustrative cases—the method is applicable to practically all cases, but I believe it has not been applied to cases of the femur with the frequency which the results deserve, from fear of shortening and lateral deviations.

In some instances the radical operation may give place to more conservative non-operative methods, the progress of the disease being kept under close observation in order that operation may be recommended in progressive cases before the formation of sinuses and mixed infection. The old operation of exposing the bone, and of eradicating the disease by a process of drilling, scraping and drainage may be indicated occasionally, and gives good results.

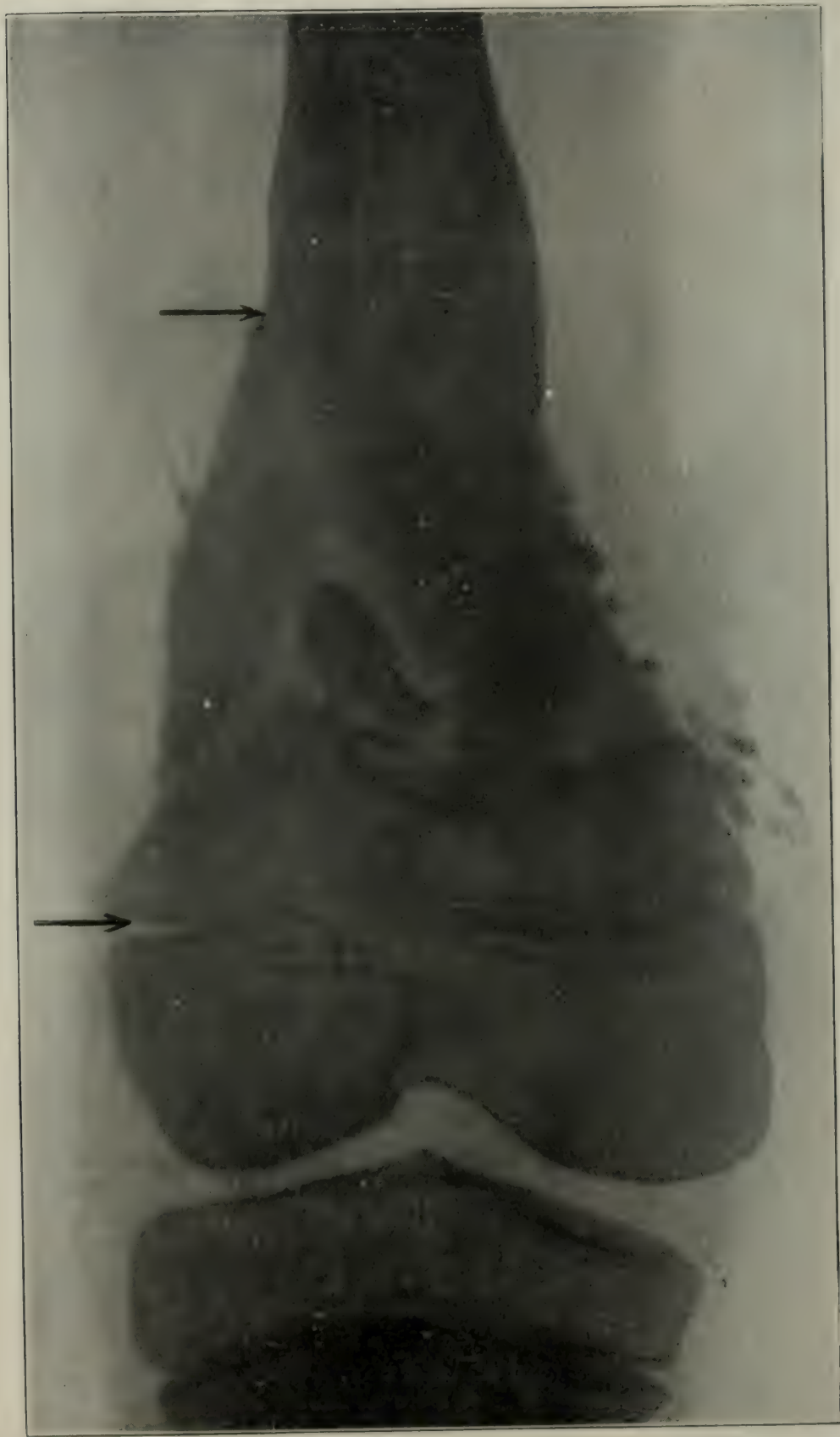
The operation of choice is, however, to divide the bone with a Gigli's saw at a level well above the disease, as shown by the skiagram, and to wrench the metaphysis and diaphysis away from the epiphysis by means of a powerful forceps. In no instance can the "epiphyseal line" be injured, for this is part of the epiphyseal mass, which could not, by the use of any reasonable force, be pulled away from the joint. As a rule, in the presence of disease at or near the juxta-epiphyseal line little force is required to remove the diseased portion from the epiphysis, and if difficulty is experienced a few touches of the chisel will complete the separation.

The periosteum in these cases is thickened, and easily separated from the bone. The latter is removed from the tube of periosteum, as is familiar in rib operations, only with very much more facility. Whatever the rôle of the periosteum in the production of new bone, it at least acts as a tubular guide to promote regularity of growth.

Without the aid of *x-ray* photographs it would be difficult to believe with what accuracy the bone is replaced by



X-ray of second case one year after operation. (The bone removed is shown in Fig. 1 and the new bone lies between the arrows.)



X-ray of third case. Some months after operation, the bone is in process of formation. Bismuth paste is seen. The bone removed is shown in Fig. 2.

osteogenetic forces in a comparatively short time. (Plates XIV., XV., and XVI.)

In my first case, operated upon in 1909, before any similar cases had been put on record, I removed the lower third of the femur in a boy suffering from tubercular metaphysitis. In this case a mixed infection was present, and an old-standing sinus discharged in the popliteal space. The result of the operation is shown in the accompanying skiagram (Plate XIV.). The boy has perfect use of his leg; there is three-quarters of an inch shortening, and the movements of the knee-joint are normal. The treatment after operation consisted in the application of an 8 lb. weight and pulley with lateral sand-bags.

The second and third cases were also septic from the existence of old-standing sinuses, but nothing could have excelled the results of "metaphysectomy." The third case, which has but recently left hospital, shows in the skiagram the formation of the new bone as yet incomplete (Plate XVI.). The portions of bone removed from the last two cases are illustrated (in Plate XIII., Figs. 1 and 2)—the specimen from the first case (Plate XIV.), which was in every respect similar, but larger, was unfortunately lost.

I must again acknowledge my indebtedness to Mr. Stiles, whose work I had an opportunity of seeing, and who has helped to put this whole subject on a sound and scientific basis.

BRITISH ASSOCIATION OF THE INTERNATIONAL MEDICAL PRESS.

IN accordance with custom, the meeting of the International Association of the Medical Press will be held on some day immediately preceding the International Medical Congress, which meets in London on Wednesday, August 6th next. A consideration of the representations made by the President of the International Association of the Medical Press leads to the suggestion that the meeting of that Association should be held in London upon Tuesday, August 5th, at some hour and place to be fixed later. The subjects of discussion for the meeting have not yet been supplied by the General Secretary of the International Committee, but we understand that one of them will be "Medical Terminology."

PART II.

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

My System for Ladies. By J. P. MÜLLER (ex-Lieut. of Engineers, Denmark). London : Ewart, Seymour & Co.

THIS book is an adaptation of an earlier one by the same author which was intended primarily for men. The principles are the same in both books, but some of the exercises are different, and are intended to be specially useful to ladies.

Müller's system is, of course, already well known. It consists of nothing more than some carefully selected muscular exercises, combined with what he calls "rubbing exercises," which are a sort of superficial massage. Of the benefit of such exercises there can be no doubt, provided they are used in suitable cases, and the author adds to his instructions much good advice about deep breathing, the corset, bathing and fresh air.

The exercises are all illustrated by good photographs and require no apparatus.

The Treatment of Disease in Children. By G. A. SUTHERLAND, M.D., F.R.C.P. London : Henry Frowde ; and Hodder & Stoughton. 1913. Demy 8vo. Pp. 403.

THE second edition of this useful book has been considerably enlarged and a good deal of new matter added. This is chiefly due to the inclusion of new remedies, but additional sections have also been added in the specific fevers and on skin diseases, thereby considerably enhancing the usefulness of the book.

The author adheres to his original plan of usually giving only one method of treatment, so, of course, many useful methods are not even touched on, but what he does give has generally the merit that he is speaking from personal

experience. The book cannot be regarded as anything like a complete account of the treatment of any disease, but will be found very useful for either the student or general practitioner who wants a small, handy and reliable book on the subject.

Several good prescriptions and food tables are included, which will be found very useful.

SMALL-POX AND VACCINATION.

1. *Studies in Small-pox and Vaccination.* By WILLIAM HANNA, M.A., M.D., D.P.H., Assistant Medical Officer of Health for the Port of Liverpool ; Visiting Physician to the Port Isolation Hospital. Bristol : John Wright & Son, Ltd. London : Simpkin, Marshall, Hamilton, Kent & Co., Ltd. 1913. Pp. 52.
2. *Seventeenth Annual Report of the National Anti-Vaccination League, presented to Members and Delegates at the Annual Conference, Caxton Hall, Westminster, on Thursday, March 13th, 1913.* League Offices : Garrick House, 27 Southampton Street, Strand, London, W.C. Pp. 46.

IN a manner, these are noteworthy contributions to the much-discussed question of the Prevention of Small-pox.

1. Dr. Hanna's work is the outcome of several years of observation of cases of small-pox which have occurred in the City and Port of Liverpool, the majority of the cases—2,280 in number, with 161 deaths—coming under observation in the last epidemic of 1902–1903. All of these cases were not available for the purposes of Dr. Hanna's investigation, which was carried out in relation to 1,163 patients, of whom 943 had been vaccinated in infancy and 220 had never been vaccinated.

The inquiry embraced—(1) a statistical study of 1,163 cases of small-pox, with special reference to vaccination in modifying the disease ; (2) an analysis of 943 cases of small-pox (with primary vaccination) in relation to scar-area and severity of disease ; and (3) observations on the interaction of concurrent variola and vaccinia.

The author draws the following conclusions from his researches :—

First, as to the influence of a primary vaccination in modifying small-pox, the case-mortality, which in the unvaccinated ranges from 25 to 40 per cent., falls to about 3 per cent. in those who have been well vaccinated in infancy.

Secondly, among the unvaccinated, persons at the extremes of life—mainly children under 10 years of age and old people—are those who suffer most, the case-mortality rising to 50 per cent. Among the vaccinated, no cases were recorded among children under 3 years; no deaths were recorded under 20 years, but as age advances vaccination is shown to gradually lose its protective and modifying power.

Thirdly, even when—owing to age and consequent gradual loss of vaccinal immunity—vaccination is unable to stop the development of small-pox, it may modify the extent and character of the eruption to such a degree as to make it so exceedingly mild that in many instances the disease may escape detection.

Fourthly, the scar-area of vaccination has an important bearing on the severity of the disease—the larger the area, the milder the character of the disease.

Fifthly, the vaccination scar-area gets larger as age advances until the 20–30 years age-period is reached. It then gradually becomes smaller—in all probability owing to atrophy of the scar tissues.

As regards the interaction of concurrent small-pox and the vaccine disease, Dr. Hanna concludes from personal observation that vaccination performed subsequently to infection with small-pox and up to the date of onset of symptoms will “take” and pass through its typical course. He found that protection is afforded against small-pox by vaccination when performed within three days after infection, but this protection may not be absolute in cases vaccinated for the first time. The course of the attack, however, will be exceedingly mild.

With respect to this observation, it is interesting to

call to mind the fact that, whereas the duration of incubation is 12 days in small-pox taken in the usual way, it is shortened to 8 days in inoculation cases as it is in cases of vaccination also.

Lastly, Dr. Hanna considers that there is abundant evidence of the value of vaccination in mitigating the severity of small-pox when performed at any time after infection up to the date of onset of the disease and even afterwards.

This valuable contribution to the literature of small-pox and vaccination is illustrated by a number of charts, diagrams, tables, and photographs. Chart A is quite unique. It shows in the clearest possible way by means of coloured columns the relative severity of small-pox as it affects vaccinated and unvaccinated persons. It is based on the records of 1,163 cases of the disease observed in Liverpool during the ten years, 1902–1911.

2. To those who have had professional experience of the horrors of small-pox the “Seventeenth Annual Report of the National Anti-Vaccination League” is but sorry reading.

From the “Rules” we learn that “the objects for which the League is established are :—The entire repeal of the Vaccination Acts ; the dis-establishment and dis-endowment of the practice of Vaccination, and the abolition of all regulations in regard to vaccination as conditions of employment in the Army, Navy and in all State departments, or of admission to Educational or other Institutions.”

The first paragraph of the Report informs us that the sixteenth annual meeting of the League was held at Caxton Hall, Westminster, on Tuesday, March 19, 1912—“there was an excellent attendance, including many pro-vaccinists, some of whom were much impressed by what they heard.” The Executive Council of the League report “with pleasure” that the Board of Education discourage any reference to vaccination in the medical inspection of school children. The Civil Service Commis-

sioners also, "after the death *after* vaccination of a boy clerk," agreed that in future candidates shall be informed that they may obtain exemption from vaccination by making a Statutory Declaration of conscientious objection. "Thus, on October 16th, 1912, compulsory vaccination in His Majesty's Civil Service received its death blow." "The number of children in England and Wales for whom parents made declarations under the Act of 1907 was 248,483 in 1911, the last year for which the records are published."

The Report goes on to describe the Propagandist work of the year with which it deals—March, 1912, to March, 1913. Under the heading "Ireland" we read:—"We are glad to record a year of great activity here. In Belfast there were many prosecutions, and the Branch of the Irish League there was very active. Two deputations waited on the Guardians, one against vaccination, the other in favour, but the Board refused to stop prosecutions. Other Boards in the South, however, came into line with the North and South Dublin Boards, and now there are over 20 Unions in which the Vaccination Act is not enforced. The Irish Local Government Board did its best to persuade the various Boards of Guardians that it was their duty to enforce the law, but the latter have stuck to their guns, and month by month other local authorities follow suit. The success of our movement in Ireland is apparent from the Annual Report of the Irish L. G. B., in which special mention is made of Anti-Vaccination activity." But there is a rift in the lute—"Attempts were made to arouse the interest of Irish Members of Parliament, and some asked useful questions. The Irish Party in Parliament do not, however, take up the matter as they ought, and it rests with the Irish people themselves to force it on them. The activity of the past year makes us hope that before long Ireland will not be the only part of the British Isles without legal relief from compulsion."

This last sentence is somewhat ambiguous, and in consequence we are, as ardent supporters of vaccination and re-vaccination, able to join heartily in its aspiration.

The League carries the war to distant climes—imperial and foreign alike—"It is a pleasure to record that in New Zealand vaccination is less and less practised."

The Report concludes with a rap at "the doctors." "In every direction we observe the success of our efforts. Slowly but surely the light is breaking in on many who have been our most determined opponents in the past. Unfortunately, a large majority of the medical profession remain in their state of darkness, and obstinately refuse to open their eyes to the facts. The time, however, has passed when the doctors can stay our progress. Truth must win, and truth is on our side."

This style of writing would be amusing were it not for its tragic side. We do not deny to sanitation a controlling power over the dissemination of small-pox; but we maintain against all comers the thesis that vaccination in infancy and revaccination towards the approach of puberty are the best preventives of that terrible disease known to medical science at the present day. J. W. M.

Consumption in General Practice. By H. HYSLOP THOMSON, M.D., D.P.H., Medical Superintendent of Liverpool Sanatorium. Second Edition. Oxford Medical Publications. London: Henry Frowde & Hodder & Stoughton. Demy 8vo. 1912. Pp. xv + 335.

OF the many works on consumption which have appeared recently Dr. Hyslop Thomson's is one of the best. It is comprehensive and readable and, above all, practical as regards the recognition of the varying symptoms which show themselves during the course of the disease, and in regard to treatment. The author is a believer in the use of tuberculin subsequent to treatment by induced auto-inoculation. He advocates the use of T.R. or B.E. in gradually increased doses. Although he recognises the value of the opsonic method as a control to dosage, he considers that the expense and laborious nature of repeated estimations of the index place it beyond the routine work of private practice, while the work of Inman showing that

the opsonic index varies inversely as the temperature renders the temperature chart a safe guide to dosage and frequency of administration in cases which are non-reactive to muscular movement. In the practice of the author the initial dose of T. R. is .02 cc. of a dilution of 1 in 1,000, and the maximal dose in most cases is 1 cc. of a dilution of 1 in 100. In his hands the method has given satisfactory results, and in his opinion the secret of success lies in evoking a marked tolerance to increasing doses of tuberculin without inducing a pronounced general or focal reaction.

As regards the use of tuberculin (O.T. or T.R.) in diagnosis, on page 52 we read—"0.1 cc. of either tuberculin diluted with a sterile 30 per cent. solution of glycerine in water may be used as an initial dose." Surely there is an error here. We think that few clinicians would care to give a diagnostic injection of 0.1 cc. of, say, O.T. !

Apart from this criticism we have nothing but praise for this book, which we have studied with profit and interest.

The Dublin University Calendar for the Year 1912-1913.

Volume II. Dublin : Printed at the University Press.

Hodges, Figgis & Co., Ltd., Grafton Street, Publishers to the University. 1913. 8vo. Pp. iv + 345.

THE second volume of the University Calendar for the current academic year contains the usual information relative to Honours and Prizes awarded during 1912 in Arts and in the various professional Schools of Trinity College.

At page 107 there is a statement as to the total number of students on the College Books, under the standing of the Master of Arts Degree. It is as follows :—Women : Non-foundation Scholars, 14 ; Pensioners, 183 ; Sizars, 3 ; total, 200. Men : Scholars of the House, 70 ; Pensioners, 986 ; Sizars, Ex-Sizars, and Sizarship Exhibitioners, 39 ; total, 1,095. The grand total is 1,295, or 19 over the corresponding number for the previous year—1,276. The

above number, 1,295, does not include the names of students in the Medical School or Law School who have not paid the last half-yearly Arts Fee. The University Electors number 5,048 in the present year. The list needs revision.

A Short Practice of Midwifery: Embodying the Treatment adopted in the Rotunda Hospital, Dublin. By HENRY JELLETT, M.D., F.R.C.P.I., &c., Master, Rotunda Hospital, &c., &c. Sixth Edition, revised. With 4 Coloured Plates and 207 Illustrations, and an Appendix containing the Statistics of the Hospital for the last twenty-two years. London: J. & A. Churchill. 1913. Pp. 619 + xv.

A SIXTH edition seldom calls for a lengthy review, and in this "small Jellett," as it is popularly called, in contradistinction to the larger manual, there is but little to criticise. The special advantage in the work is that it embodies the treatment as at present carried out in the Rotunda Hospital, for Dr. Jellett has attained the important and honourable position of Master of the Hospital since the last edition was published.

There are few changes. The size of the page has been increased in order to enable better illustrations to be used, and many new and excellent illustrations are to be found. From a statistical point of view the Appendix is most useful, over 36,000 cases of labour being carefully analysed. Dr. Jellett describes the "True Conjugate" as the distance between the promontory of the sacrum and the most prominent part of the back of the symphysis. Some other authorities name this the "Obstetrical Conjugate," and give as the anterior point for the true conjugate the top of the pubic symphysis. The former seems to be the more correct definition, but we should like to have absolute agreement on such an important measurement. There is only one method described for obtaining Hegar's sign of pregnancy; we should be glad to see the other methods mentioned. The Stroganoff treatment of eclampsia,

slightly modified, is favoured, and the results are gratifying. The treatments of sapræmia and septic infection are most instructive. For the former, in addition to the usual purging and douching, the injection of formalin 10 per cent. to 50 per cent., or peroxide of hydrogen 30 per cent. to 50 per cent., is recommended. "An actual curetting is very seldom indicated." If a fœtid discharge persists in spite of douching, the use of a tight plug of iodoform gauze is preferred to the curette; this is removed on the following day and a fresh plug inserted, and this method of treatment is followed until decomposition ceases. The treatment of septic infection by means of vaccines, serums, &c., is discussed, and a warning is given to be on the alert for septic thrombosis, for which operation is advised, and has been successfully accomplished by the author.

There is no doubt that this work is amongst the most valuable, if not *the* most valuable, of all the smaller textbooks on midwifery. In general comprehension this edition is up to the excellent standard of its predecessors.

Cunningham's Manual of Practical Anatomy. By the late D. J. CUNNINGHAM. Fifth Edition. Edited by ARTHUR ROBINSON, Professor of Anatomy in the University of Edinburgh. Volume II. Thorax; Neck and Head. Edinburgh, Glasgow and London: Henry Frowde, and Hodder & Stoughton. 1912. Cr. 8vo. Pp. xxx + 616.

WE are glad to find that Cunningham's Manual of Practical Anatomy in its fifth edition is not changed beyond recognition. It is still the attractive book which has served so many generations of medical students as a well-trusted guide. The alterations which have been made by Professor Arthur Robinson—its present editor—have been in many cases necessary, and in all cases are the results of thoughtful consideration. Perhaps the greatest change is the introduction of the Basle nomenclature throughout the entire text and the restriction in the use of English names which are not in agreement with the British

Medical Association. Several new plans for the dissection of the head and neck and thorax have been designed. Those described for the thorax have been rendered possible by the use of improved methods of preservation, and they certainly afford better facilities for the study of important structures and relationships than the older more complicated procedures.

We venture to hope that the illustrations which may be added in future editions will be similar to the best of the older clear and diagrammatic figures, rather than complicated pictures, like a few of the new figures in the manual, which need realistic colouring in order to bring out the details with which they are over-crowded.

A. F. D.

Guy's Hospital Reports. Edited by J. F. STEWARD, M.S., and HERBERT FRENCH, M.D. Vol. LXVI. Being Vol. LI. of the Third Series. London: J. & A. Churchill. MDCCCXII. 8vo. Pp. xxxiv + 414.

THIS year's volume of the *Guy's Hospital Reports* contains no special article of epoch-making character, but is full of carefully written compilations and reports on subjects of clinical interest. The neurological studies, which formed an interesting feature of last year's report, are continued in the present volume, and are from the same source—namely, the pen of Dr. Arthur Hertz. The first study consists of an analysis of 50 cases of disseminated sclerosis with an attempt to found a classification thereon; while other subjects that receive attention include the vibratory sense, hereditary intention tremor, and lead neuritis with involvement of the circumflex nerve. Dr. Frederick Taylor writes on 55 cases of opium poisoning, and other lengthy articles are those on congenital intestinal occlusion by Dr. Spriggs, and the ætiology of melæna neonatorum by Wilson Tyson. A striking clinical record, showing the steady fall in blood pressure that may be brought about by quite moderate doses of potassium iodide is contributed by Herbert French, who is also responsible for no less than seven other clinical records of

unusual cases, and for an article, previously published in one of the weekly journals, on "A Simple Method of Letting Blood by means of a Short, Wide, Hollow Needle." On the surgical side, Rowlands reports an unusual instance of gall-stone colic following operation for the removal of gall-stones, and produced by the pressure of blood clot. Turner writes on the external abdominal ring, and describes his method for the radical cure of hernia, which leaves the external ring intact. Reports from the Throat Department and from the Aural Department are also included, and at the beginning of the book a sympathetic account is given of the life and work of the late Dr. Pavy.

Each year we look forward to the publication of Guy's Report, and read it through with pleasure and profit. This year's volume has not disappointed our expectations.

Chloride of Lime in Sanitation. By ALBERT H. HOOKER, Technical Director Hooker Electro-Chemical Company. New York : John Wiley & Sons. London : Chapman & Hall. 1913. Pp. v + 231.

THE Research Department of the Hooker Electro-Chemical Company, Niagara Falls, N.Y., having undertaken to collect data relating to the uses of chlorinated lime in sanitation, a large amount of information has been collected which verifies the fact that this inexpensive chemical is one of the most efficient and economical agents available for the protection of the public health in many directions. The evidence gathered is set forth in the book before us.

The growth of the chemical industry is traced in outline. It reached its zenith in Great Britain about 1880, when the English manufacturers controlled practically the world's trade in alkali and its products. Subsequently, protected by tariff walls, the industry has taken root in other countries, notably in Germany and in the United States, and the British manufacturer finds himself to-day shut out in a great measure from markets which formerly he regarded as his own.

The introduction of the electrolytic processes for the decomposition of brine has aided the American competitor, through the facility which he enjoys of obtaining electric power at a cheap rate. Accordingly we read that in 1910 the United States produced within its borders about two-thirds of the amount of chlorinated lime requisite for its supply ; yet the United States started making this chemical as recently as 1895 !

The book is much more than a mere trade advertisement for chlorinated lime. It deals scientifically with its use in the purification of water supplies, for sewage disinfection and for street sprinkling and flushing, in epidemics and general sanitation, on the farm, and in the prevention of the fly nuisance.

More than half the volume consists of abstracts and references which cover a wide field in regard to sanitation. This portion of the book forms a useful bibliography of recent public health work, notably in regard to water and sewage purification, typhoid carriers, and the house-fly as a carrier of infection. This bibliography makes it a very valuable work of reference.

The Blue Wall. A Story of Strangeness and Struggle.

By RICHARD WASHBURN CHILD. London : Constable & Co., Ltd. Boston and New York : Houghton Mifflin Company. 1912. Cr. 8vo. Pp. vii + 377.

THIS tale of mystery opens with a description by her physician of the serious illness of a little girl, the only child of wealthy New York parents, and how she appears to be influenced or disturbed by some unknown power on the other side of the blue wall, against which her bed is placed. How the doctor finally runs to earth the mystery shrouding this telepathic communication from the house next door, takes the author some three hundred and seventy-seven pages in the telling.

At times one is a little wearied by the introduction of so many side issues in the tale and the lack of centralisation, but the author evades many difficulties by his

skilful weaving of mystery and counter-mystery. On the whole we think the subject more suitable for treatment in a short story. The author often fails to hold the attention of the reader.

Transactions of the Thirty-fourth Annual Meeting of the American Laryngological Association. New York. 1912. Royal 8vo. Pp. 358.

To this volume of the Transactions of the American Laryngological Association, Dr. J. O. Roe contributes a very interesting article on Orbital Abscess from Infection through the Ethmoid, and he has found that by operating through the nose, it is possible to relieve the condition at the point of infection, and thus save external mark, and at the same time reach the pus quickly. He operates through the posterior ethmoidal cells by means of a forceps cutting at right angles. He mentions the following anatomical point—that in examining a skull the cranial cavity is always found rounded at this region, so that the cranial contents lie posterior to a line drawn at right angles to the posterior nasal wall. Therefore, by locating the posterior nasal wall accurately and going in laterally at right angles to the anterior plane of this wall, the posterior ethmoidal cells can be opened with the utmost ease and accuracy, and with entire freedom from danger of penetrating the cranial wall, whereas by penetrating these cells antero-posteriorly, we have no certainty as to when we have reached the last posterior cell, or the anterior cranial wall.

Dr. Mosher describes some of the anatomy of the ethmoidal labyrinth in relation to operation, and points out a new method of opening up the ethmoidal cells by commencing in the cell of the agger nasi. This should prove a much easier method of reaching the ethmoidal cells than beginning further back, as is the usual practice.

Dr. H. L. Wagner mentions in a paper on the Pathogenesis of Bronchial Asthma, the cases of two men who had been cured of asthma by nasal treatment, and subsequently both had prophylactic injections of diphtheria

antitoxin, as the disease was in their houses. The result was similar and noteworthy in each case. They had nearly all the symptoms of anaphylaxis, and the asthma returned, commencing with a sudden attack of paroxysmal sneezing. The cases went on much in the same way, and it took six to eight weeks before the asthma attacks ceased. Nasal treatment was of more use than general treatment. It would seem that in cases of asthma all serum treatment should be most carefully considered before being used, and every attempt should be made to avoid the troubles incident to the condition known as anaphylaxis.

Flatulence and Shock. By F. G. CROOKSHANK, M.D. Lond.; M.R.C.P.; Hon. Physician to the Western General Dispensary, Marylebone, N.W.; Assistant Physician, the Belgrave Hospital for Children. London: H. K. Lewis. 1912.

THIS little book of under fifty pages contains two lectures—the one on Flatulence, and the other on Shock. The former lecture is much the longer of the two; it is more discursive than illuminating, and in our opinion contributes but little to our previous knowledge of the subject. Treatment in particular is lightly handled, and the whole lecture is unsystematic. The second lecture is more interesting. It contains the record of some clinical cases which bear on the subject of delayed shock.

Snake Bite and its Scientific Treatment. By F. W. FITZSIMONS, F.Z.S., F.R.M.S., &c.; Director of Port Elizabeth Museum. London: Longmans, Green & Co. Capetown and Pretoria: T. Maskew. 8vo. Pp. 15.

THE author's "Snake Bite Outfit," which is sold in Cape Town and intended primarily for use in South Africa, contains a ligature, permanganate and a knife, a suitable sized syringe, and sufficient polyvalent antivenin for a full dose, also antiseptics and this pamphlet. Any person

with commonsense, although without previous medical knowledge, ought to be able from its full and clear instructions to apply a ligature, scarify the bite, rub in permanganate, and finally inject the serum. There is also included valuable advice as to the general treatment of the patient. Up to the present antivenom serum has been of comparatively little use, owing to the fact that it is not usually at hand at the same time as the snake, but if those who live in snake-infested countries could be induced to keep by them a dose of serum and a suitable outfit, and learn how to use them, many lives of men and of valuable animals might be saved.

Report on Blackwater Fever in Southern Nigeria, 1899-1911.

By W. M. GRAHAM, M.B., Director of the Medical Research Institute, Lagos. Published by the Crown Agents for the Colonies. London: Waterlow & Sons, Ltd. Twelve Micrographs, Temperature Charts and a Map. 1912. Folio. Pp. 72.

DR. GRAHAM, instead of writing a report for the year 1911, has written a comprehensive and valuable report of all the recorded cases of blackwater fever in his colony of Southern Nigeria. The hypotheses at present supported by writers on the subject, failing any exact knowledge, are briefly as follows:—(1) That blackwater fever is an attack of malaria with hæmoglobinuric symptoms; (2) that it is a quinine intoxication; (3) that it is malaria + quinine + idiosyncrasy; and (4) that it is a specific disease. The arguments advanced by the author are too full to be entered into here, but students of tropical diseases, and more especially those who may be connected with West Africa or other blackwater fever area, are recommended to read the report, and to consider them carefully. He himself makes no definite deduction as to the cause of the disease, but it is plain that he inclines to the belief that blackwater fever is a disease *sui generis* with a long incubation period, and that it is probably infectious, or at least directly transmissible from one man

to another. Of the new evidence produced the most interesting is that of the occurrence of many more cases among the natives than has usually been supposed, and it seems probable that, as is the case in malaria, native children suffer from the disease, becoming immune by the age of puberty. Again, the author has examined many cases of sequence in the disease where two or more cases follow one another in the same house, or among those in close contact, forming what may be termed limited epidemics. A curious error occurs in the arguments as to the length of the incubation period. An attack $1\frac{5}{10}$ months after return to the colony from a five months' leave does not, as he says, contraindicate an incubation period of eight months. In fact all the cases he mentions of the disease in those returned from leave might have had an incubation of ten months, and Manson cites a case of an attack nine and a half months after arrival home from a blackwater fever area.

We know so little about the actual ætiology of this most fatal disease that any carefully worked up report like that under consideration will always be welcome.

PRIZE ESSAY ON DIABETES.

THE Society of Karlsbad Physicians announces a prize to be given for the best essay on "The Treatment of Diabetes Mellitus, with Special Reference to Balneotherapy." The jury will be :—Hofrat Prof. Dr. Ritter v. Jaksch, of Prague ; Prof. Dr. Luethje, of Kiel ; Prof. Dr. Ortner, of Vienna ; Prof. Dr. Schmidt, of Innsbruck ; and Dr. Edgar Ganz, President of the Society of Karlsbad Physicians. It remains optional with the judges to award either one prize of 5,000 Kronen, or two prizes of 3,500 Kronen and 1,500 Kronen, or three prizes of 2,500 Kronen, 1,500 Kronen and 1,000 Kronen. The competition is open to physicians of all countries. Any language may be used. The essays must be sent in not later than December 31, 1913. Any further information may be obtained from the Society of Karlsbad Physicians, Karlsbad, Austria.

PART III.

MEDICAL MISCELLANY.

Reports, Transactions, and Scientific Intelligence.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

President—WALTER G. SMITH, M.D., F.R.C.P.I.
General Secretary—J. A. SCOTT, M.D., F.R.C.S.I.

SECTION OF SURGERY.

President—R. D. PUREFOY, P.R.C.S.I.
Sectional Secretary—C. A. BALL, F.R.C.S.I.

Clinical Meeting of the Section, held on Friday, January 10, 1913.

THE PRESIDENT in the Chair.

Three Cases of Tubercular Disease of the Lower End of the Femur—X-ray Photographs and Specimens after Operation, illustrating some general principles.

MR. W. I. DE COURCEY WHEELER exhibited three cases of tuberculosis of the lower end of the femur in children, illustrating recent pathological and anatomical work on this subject [This Paper will be found at page 261].

MR. J. BOYD BARRETT said that the difficulty appeared to him to be in the after-treatment of such cases. He had no doubt that great care was required to keep the knee in position after the operation. He asked Mr. Wheeler to illustrate a little of the after-treatment.

MR. W. PEARSON said that some of the points raised in the communication were applicable not alone to these cases, but also to the general treatment of osteomyelitis. He did not think that the points in pathology were absolutely new. He considered that this method of treatment is the only

sound method in dealing with a bony cavity of any large extent. He referred to the experience in cases treated by scraping, plugging, &c., in which sinuses kept on discharging as if nothing had been done. He asked whether in these cases the cavity left after the removal of the bone is filled with wax or whether the periosteum is allowed to collapse, because he thought the latter would be sufficient. He considered that some extension was necessary while the new bone was forming, otherwise there would be a great amount of shortening of the limb, and he had no doubt that even in the cases shown there would be some shortening. He thought that it would be helpful if one were to be satisfied with a less extensive operation—viz., not to excise the whole circumference. He was much interested in the cases which illustrated how rapidly the bone formed in young subjects.

MR. HAUGHTON said the subject of the communication was of extraordinary interest, and the cases proved the excellence of the operation. He pointed out that it was stated by Mr. Harold Styles that the treatment in such bone cases was more difficult than some major operations in abdominal surgery. His experience was that the vital point in the treatment was the removal of all disease. X-ray photographs should be relied on to ascertain the extent of the disease, and the operation could then be planned precisely. He referred to his experience with osteomyelitis, and said that complete removal of the diseased bone was followed by complete recovery. In a recent case he had removed about eight inches of the diaphysis of the femur, and when the sequestrum was removed there was a three-inch gap. Extension was put on, and in three months' time the wound was healed, and in six months' time the patient was walking on a new column of bone. He again emphasised the vital points—*i.e.*, complete removal and *x*-rays to help.

MR. MAUNSELL said that, in the diagnosis of these cases, he thought that a great many of them were looked on as tubercular which were really septic osteomyelitis, but he had no doubt that afterwards they had become tubercular, although at the start they were either acute or sub-acute osteomyelitis. He was in agreement with the removal of all diseased tissue, but he had seen cavities which had not been laid thoroughly flat, and they healed up perfectly well. In osteomyelitis cases, either tubercular or non-tubercular, he

thought that it was not wise to proceed with great haste, and that one should be guided by *x*-rays. He thought that certain cases would heal up with a much more modified operation than the total removal of the diaphysis. He looked on the cases as a useful lesson in physiology, as they helped the surgeon in not being afraid of removing a large quantity of bone. He would, however, be slow to remove a large piece of the diaphysis, and would be satisfied with more moderate measures.

THE PRESIDENT said that these cases recalled to his mind a case that came under his notice some years ago when on the staff of the Adelaide Hospital. He was asked to procure admission for a boy with disease of the leg. The patient was in a most pitiful condition—emaciated, &c.—and recovery appeared to be out of the question at the time. Four-fifths of one tibia was in a shocking condition from chronic disease of the bone. Mr. Barton cut down and removed the sequestrum, the boy made an extraordinary recovery, and a couple of years afterwards emigrated, having in the meantime grown to nearly six feet in height. He considered that this case illustrated the extraordinary power of recovery seen in these cases.

MR. WHEELER, in replying to the remarks, said he was indebted to Dr. Maurice Hayes for the photographs in those cases. Referring to the after-treatment, he said that this seemed important at first sight, but he found that 7 or 8 lbs. of sand bags were good enough for the pull. He pointed out that the interesting part of the subject was really new, and that it was first pointed out by Lexer, who showed that all the blood-vessels anastomised in this region, and that contusions and sprains easily set up tubercular abscesses in the joint. With regard to Brodie's abscess, he would like to dissociate himself from everything but tubercular disease. As to the periosteum being adherent in each of the three cases he found it easy to separate the periosteum. He used bismuth paste and iodoform, and did not attempt to fill the cavity up. Referring to Mr. Maunsell's remarks, he said that there was no bone or other trouble until the abscess was noticed in the popliteal space. The cases were very chronic when he got them, and there was no hurry about them. In the first case he had tried scraping without effect.

Scapular Crepitations.

MR. W. PEARSON showed a child, aged seven, who first came to him about two years ago for creaking in the shoulders. The condition was first noticed after an attack of measles. He could ascertain no satisfactory explanation for the condition. Symmetrical crepitations were to be found on moving the scapula. X-rays showed nothing to account for this. Massage and fibrolysin injections were tried, but there was no apparent change in the condition. The crackling was quite audible. He suggested that there might be cartilaginous formation or exostoses, which might be so small as not to be shown by *x-ray*. He thought there was nothing in the muscles to account for the peculiarity, and there was certainly nothing in the joint.

MR. MAUNSELL said he remembered seeing a case of the kind described, and he thought the idea was that the condition was looked on as hysterical. He had a patient under his care who could make a similar kind of grating with both knees. He knew of another girl who could crack her knees as loud as a carter's whip. He would be inclined to look on the condition as purely hysterical.

THE PRESIDENT said that although unwilling to hazard any observations on a purely surgical question, he had in mind the case of a young girl in which the movement of one knee was attended by a cracking sound that caused her discomfort, but he thought the condition afterwards disappeared. He looked on the case as of rheumatic origin.

MR. WHEELER said the case seemed unique, as one was not familiar with anything resembling it. He would not like to make a diagnosis, but suggested the possibility of some myositis ossificans affecting some of the muscles.

MR. PEARSON, in replying to the remarks, said he was not inclined to look on the condition as hysterical on account of the child being so young (only five years old when first seen). Myositis ossificans ran into his mind, but if this was the cause he thought the movements should be somewhat restricted, and something should be seen by the *x-rays*. He had seen the child once every two or three months since the condition had been first noticed, and there appeared to be no change.

*Case of Abdominal Aneurysm cured by Operation, with
Photographs and X-rays.*

MR. R. CHARLES B. MAUNSELL showed a female, aged thirty years, upon whom he had operated on August 3rd, 1912, for cure of a large aneurysm of the abdominal aorta in the region of the cœliac axis. Before operation the aneurysm had a diameter of over seven inches, pulsated violently, and caused so much pain that the patient had to be given frequent injections of morphine. There was a regurgitant bruit heard over the mitral area and a loud, harsh, systolic bruit all over the epigastric swelling and over the aorta below it. At operation the wall of the aneurysm was thin and extremely tense. The operation consisted in abdominal section and the insertion of a Colt's wire wisp which measured five inches and contained one hundred and fifty inches of wire having a surface area of three and a half square inches. On the eighth day after operation she was allowed fish, &c., and on the eighteenth day she was allowed to sit in a chair, but she did not leave hospital until November 5th—*i.e.*, three months after operation—as she would have had to work for her living as soon as discharged. Her present condition is excellent; she is free from pain, and is able to do ordinary work, including the scrubbing of floors. There is a firm, hard mass of about three or four inches' diameter to be felt in the epigastrium which pulsates with pulsations transmitted from the aorta, but exhibits no distensile pulsation. There is a mitral bruit to be heard over the heart, but the loud bruit over the aneurysm has disappeared. X-ray examinations do not show any distensile pulsation.

MR. C. A. BALL congratulated Mr. Maunsell on the result of the operation, and inquired if a Wassermann's reaction had been done, as he gathered the case was suspected to be of syphilitic origin, and also if any anti-syphilitic treatment had been given in addition to the operation.

MR. WHEELER said that he had treated three cases by a similar method, and he thought it was important that every such case should be published, seeing that abdominal aneurysm is not frequently seen. He was much interested in Mr. Maunsell's case on account of the pain. All his (Mr. Wheeler's) cases had pain which disappeared in a few days

after operation. His first case was very similar to Mr. Maunsell's, and it is now done two years, and the man is working away ever since. In the case of his in which the patient died there was an enormously dilated stomach, and, not content with wiring the aneurysm, he did a gastro-enterostomy. Acute intestinal obstruction followed from pressure of the aneurysm on the loop of intestine which entailed a second opening of the abdomen. The patient got an attack of vomiting, bursting his aneurysm and causing death.

MR. MAUNSELL, replying to the remarks, said that a Wassermann's reaction had not been done. He had no doubt the case was of syphilitic origin. All authorities on the subject gave 85 per cent. of cases as being syphilitic. He agreed with Mr. Wheeler as to the rarity of such cases. The first case he had met with was in a man who was under treatment for vomiting, and the aneurysm was not discovered until *post-mortem*. The second was that of a woman who was supposed to need a gastro-enterostomy. The fourth was also a stomach case, and it was accidentally that the aneurysm was found. He had seen seven aneurysm cases, but in only two had he operated.

Child with Webbed Fingers and Toes.

MR. J. BOYD BARRETT showed a child with webbed fingers and toes on each foot. The interesting point in the case was the symmetry. There were six toes on each foot. It was not proposed to do anything more than remove the outer toe. The hand, however, appeared to offer great possibility for improvement. In these cases it was usual to postpone the treatment until the fifth or sixth year, which was, he thought, a mistake. In the present case, where two of the fingers were adherent, there would be interference with the growth. The operation proposed for the fingers was Didot's and in the parts that were not covered he intended to do skin-grafting. He referred to the difficulty of keeping the graft on in the case of such a small child, and pointed out that a little silk round the finger had proved very helpful in such cases.

THE PRESIDENT referred to a case which he recorded in the Rotunda Hospital Reports of a similar nature, and in which the mother of the child exhibited a similar deformity.

MR. MAUNSELL said that recently he had two cases—one following burns—where the fingers were fused together. The second case was one in which there were extra digits both on the hands and feet. He kept the patient in hospital for a long time, and removed the extra digits and separated the fingers. His experience was that Didot's operation was not needed at all, as nothing was gained by it. He would advise not doing too many fingers at once, and having drawn them apart as much as possible and cutting out a little of the fat the skin can be brought together perfectly. His method of grafting was to stitch the edges. The child on which he had operated was now absolutely normal, and one could hardly notice that there was ever anything wrong.

MR. J. BOYD BARRETT, in replying, said he was in full agreement with Mr. Maunsell's remarks.

SECTION OF STATE MEDICINE.

President—M. J. NOLAN, L.R.C.P.I.

Sectional Secretary—W. A. WINTER, M.D., F.R.C.P.I.

Friday, January 17, 1913.

DR. T. P. C. KIRKPATRICK in the Chair.

The Sanatorium Benefit in Ireland.

DR. R. J. ROWLETTE read a paper on the above subject. He summarised the Sections of the National Insurance Act dealing with the sanatorium benefit, and sketched the machinery by which it is administered. He then defined the relations of the Insurance Committees to the County Councils, and described the various agencies to be employed in a tuberculosis campaign. He concluded with an appeal to the profession to assist cordially in the working of the benefit.

[Dr. Rowlette's paper was published in full in the number of this Journal for February, 1913. See page 95.]

DR. T. J. CROWE said it was the original idea in the working of dispensaries that the contacts should be examined, but under the conditions that every case must have its own practitioner he could not see how the original idea was to be

carried out, as the dispensary was to be only a place for consultation. So far as the treatment in Dublin has gone, most of the cases have just been sent up by the practitioners with letters asking them to be dealt with, and the rules laid down forbid the tuberculosis officer doing so. There were a tremendous number of advanced cases on the books, and what was going to be done with them he was at a loss to know.

DR. PATRICK HEFFERNAN said that there seemed to be a great diversity of opinion as to domiciliary treatment, and if the question came within the scope of the paper he would like to have a definition of what this treatment really meant.

SIR JOHN MOORE said that the remarks made by Dr. Crowe showed the precious pickle into which the Insurance Act had landed them with regard to tuberculosis. Attention had been drawn to the fact that provision was made in the Act for extension of "sanatorium benefit" to diseases other than tuberculosis, and in this connection he pointed out that although pneumonia was a disease which killed between 40,000 and 50,000 people in England and Wales alone every year, there is no notification or sanatorium treatment provided in the United Kingdom for patients suffering from it. With regard to the advanced cases of tuberculosis the conditions were deplorable, and the Act had made no provision for them. If the Insurance Act provides for the remuneration of medical officers in connection with the tuberculosis sections of the Act he thought the honorary staffs of hospitals should not consent to work those sections of the Act without fair remuneration.

DR. CROFTON said that with regard to the quality of the experts it appeared to him to be a difficult matter, especially at present when there was so much diversity of opinion as to the best way to deal with these cases. He considered that much advance would not be made in the treatment of the disease until institutions are provided completely equipped and having whole-time men at the head of them and whole-time assistants as in Germany. It was unreasonable to suppose that statistics which would impress practitioners with results can be produced until this is done.

DR. M'DONALD referred to his experience in a couple of cases which were sent to him for examination under the Act. He did not wish to examine patients apart from the practitioner in attendance, but the Commissioners insisted on

his doing so. As the position was a delicate one he asked for advice as to the course to be taken.

DR. LAW said that he thought the paper had shown how confused the Act was and how ill thought out. He considered it of the greatest importance that every case should be notified. He could not see how the expense of treatment was going to be met out of the money available. Amongst the poorer classes advanced cases were an imminent danger to the whole community, and the ideal way of dealing with such appeared to him to be compulsory segregation.

THE CHAIRMAN said that something had been learned from the paper not only of the difficulties in working the Act but also of the way in which it is proposed to work it. It was a matter of the greatest importance that they should understand this section of the Act and endeavour to make it a success. It was easy to cavil at the weak places in the Act, but he thought if the medical profession joined wholeheartedly it would do a great deal to stamp out the disease in this country. The difficulty in the past was the treatment of bread-winners, when it practically meant the breaking up of the family, but under the present Act this difficulty will in part at least be removed. In the past when a patient was met with in which there was hope for improvement he perhaps could not afford to undergo the treatment. He trusted, therefore, that they would all continue to do what they had been doing in the past.

DR. ROWLETTE, in replying, said he would like to associate himself with the appeal that they should do their best under the Act, as he thought much good could be done. As to the question of the dispensary doing more than consultative work every effort would have to be made to confine dispensary officers to consultation work, as otherwise difficulties would arise with other practitioners; but he saw no reason why one of the dispensary staff should not go in consultation to the home of the patients to examine contacts. With reference to domiciliary treatment he thought that, applying the term in the most obvious way, it would mean whatever treatment could be carried out in the home of the patient. The necessity for provision for advanced cases seemed the most important point of all, and so far as could be seen County Councils are rushing into provision of sanatoriums and taking no care whatever of the advanced cases. As to

treatment he pointed out that no general practitioner could be employed to attend his own patient without the manner of treatment being approved by the Local Government Board. Referring to the question of finance, the amount available for sanatorium benefit for the city of Dublin would be about £3,000. The Corporation would have power to levy a 1d. rate, which would bring about £4,000, and if this was done the Treasury would add a further £4,000, making the total for providing treatment £11,000. He agreed with Sir John Moore that the staffs of general hospitals were not bound to give their services free to patients whose treatment was undertaken by the State. He advised Dr. M'Donald to take the advice of the Conjoint Committee on the point raised by him. As to what constituted treatment under the Act there was great difficulty in ascertaining the point. Food supplied on a doctor's order was at first held not to be treatment, but it had since been held to be treatment.

The Mental Deficiency Bill and its proposed Extension to Ireland.

DR. W. R. DAWSON said this Bill was introduced by the Government on the 16th of May, 1912, read a second time on the 19th of July, 1912, and referred to Standing Committee B, by which up to the end of the year seven clauses had been considered and amended. These provide for the constitution of the central authority (for England), the constitution and duties of the local authority, and define the persons subject to be dealt with under the Bill, who are briefly, such idiots, imbeciles, feeble-minded persons, and moral imbeciles as are already in contact with some department of the law. One of the amendments removes a paragraph fixing unfitness to procreate children as a qualification for inclusion under the scope of the Bill, and substitutes one specifying defectives "who are in receipt of poor relief at the time of giving birth to an illegitimate child or when pregnant of such child," thus withdrawing what was in the opinion of many a serious objection to the Bill. Another objection is removed by recasting the definition of "feeble-minded persons"; and on the whole the Bill has gained greatly in Committee. The class of persons who have become mentally infirm from age or decay of their faculties has wisely been withdrawn. The local authorities are to

be the County and Borough Councils respectively, but they are not to be obliged to provide accommodation unless one-half the net cost of maintenance is contributed by Parliament. The numbers to be provided for may be roughly estimated at 10,000, not including persons in asylums, but many of these are already provided for at public expense, so that their present cost would have to be deducted from the amount required to work the Bill. As matters stand at present the Bill is to apply to England and Scotland, but not to Ireland, which requires such a measure far more than either of the former. It would not offer a complete provision, but would make a much-needed beginning, and if the present opportunity is lost there seems little chance of any legislation on this pressing matter for years to come. [This Paper is published in full at page 161.]

THE CHAIRMAN said the matter had occupied the attention of the Medico-Psychological Society (Irish Branch) for a long time, and they have done a great deal to urge the extension of the Bill to Ireland.

DR. LEEPER said he appreciated the kind way in which the Irish Division of the Medico-Psychological Society had been referred to by the Chairman. No one, unless he had worked amongst the insane of Ireland, would realise the importance of this measure to the country, because in Ireland there was an insane population which was yearly becoming greater, and he felt that that increase would go on until such a measure as the one referred to was introduced. There was nothing at present being done to stop the production of the insane, and before anything can be done a Bill such as the one proposed must be passed. If in order, he would like to propose the following resolution:—"That the Section of State Medicine of the Royal Academy of Medicine in Ireland strongly approves the extension of the Mental Deficiency Bill to Ireland, and recommends the Council of the Academy to adopt this resolution and to forward copies to the Chief Secretary for Ireland, the Lord Chancellor, and to the Irish Members of Parliament." He considered that if the Section gave its support they would be doing the country much good.

SIR JOHN MOORE seconded the resolution proposed by Dr. Leeper.

THE CHAIRMAN said he considered the resolution in order, and put it to the meeting. It was declared carried unanimously.

DR. DAWSON referred to the method of treatment which children have to undergo in asylums, and said that he did not like to see children in asylums at all. Of course, in the Stewart Institution they could only be detained if they were certified as lunatics. He saw no difficulty about the application of the Act to Ireland.

SECTION OF MEDICINE.

President—J. O'CARROLL, M.D., F.R.C.P.I.

Sectional Secretary—F. C. PURSER, M.D., F.R.C.P.I.

Friday, January 31. 1913.

THE PRESIDENT in the Chair.

A Case of Polycythæmia.

DR. O'CARROLL showed a man, aged fifty-seven, the subject of polycythæmia. He is a Corporation labourer—a scavenger—of middle height, and distinctly stout. On admission to the Richmond Hospital, on the 28th of November, 1912, he was wandering slightly in mind, was very short in breath, and had the deep purple colour of a very ripe plum. During the month before admission he had noticed some slight swelling (œdema) of the feet. He had had some cough and slight expectoration. The only pertinent fact in his previous history was that he had taken alcohol freely. He had been brought to the hospital by a friend, but he himself quite disclaimed any idea of his being ill. He moved about briskly in bed to facilitate examination without any appreciable increase in his dyspnœa. Physical examination of routine kind showed little except that the cyanosis was present over the body, though to a less degree than in the face and neck; that there was a trace of albumen in the urine; and that there was a moderate effusion in the right pleural cavity. But for his extraordinary assurance that he was quite well, he looked as if he had not an hour to live. About forty ounces of clear fluid were withdrawn from the right pleura, and he was kept under almost continuous inhalation of oxygen. Next day, no very marked alleviation in his appearance or symptoms having

occurred, ten ounces of blood were withdrawn from the basilic vein, and the administration of oxygen was continued. On his fourth day in hospital a blood count showed 7,500,000 red cells per cubic m.m. with hæmoglobin 105 per cent. Ten ounces of hypertonic saline solution were injected into the pectoral region, and the oxygen was continued. He was again wandering in mind and unconscious of his surroundings. Two days later he was again bled to the amount of ten ounces, oxygen being continued. Next day a little over forty ounces of clear fluid were taken from the right pleural cavity. An exploratory puncture of the abdomen gave no result. A blood-count on the 5th of December gave 3,800,000 red and 7,000 white cells, and hæmoglobin about normal. No abnormal forms were found. He was quite reasonable, and apparently comfortable. On the 7th of December oxygen was discontinued. Thirty-six hours later a blood-count gave about 7,000,000 red cells. Thirty-five ounces were withdrawn from the right side of the chest. He was again oxygenated for three days, and the red cells fell to 3,500,000. On the 13th of December fifty ounces were taken from right pleura. On the 16th of December, 7,450,000 red cells; on the 19th 9,250,000; on the 31st 6,250,000; on the 15th of January this year 5,500,000; on the 22nd of January 6,500,000. One examination of the specific gravity of the blood showed that it was distinctly above normal. On the 16th of January an *x-ray* examination by Dr. Watson showed apparent dilatation of the aortic arch appreciable both to right and left of the sternum. There is no abnormality of the pupils, no aphonia, no tracheal tugging, no pain, no disparity in the radial pulses, and no sign of undue rigidity of the arteries. He has been up and about for the past month; shows no distress or dyspnœa, but looks as if he were again becoming unduly plethoric.

DR. MOORHEAD said he was struck with the variation in the number of red cells in proportion to want of oxygen. His experiences in cases of chronic heart disease was that the number of red cells were found to be greatly increased. He did not regard polycythæmia as any explanation of the symptoms, but was inclined to look on it only as itself a symptom.

DR. O'KELLY and DR. CROFTON also spoke.

Early Tabes Dorsalis.

DR. T. GILLMAN MOORHEAD exhibited a typical case of tabes dorsalis occurring in early life. The patient, a girl aged twenty-three, came under his care in November last with pains in the legs and unsteadiness in the gait. On examination the signs were found to be typical—*i.e.*, absolutely no knee-jerks, no ankle-jerk, pronounced Romberg's sign, extremely ataxic gait, and pronounced Argyll-Robertson pupils. There were also areas of anæsthesia and hyperæsthesia around the abdomen. Shortly after admission to hospital Wassermann's test was fully positive. Salvarsan was administered, and since then the Wassermann has been negative; but so far as improvement in the symptoms was concerned he could observe none. There was some girdle pain complained of since the injection. He invited suggestions as to the advisableness of further injections of "606." A careful examination failed to produce any evidence of acquired specific disease, and there was no congenital history.

DR. O'KELLY said that he had not seen any bad results from the repeated use of salvarsan in cases of locomotor ataxy, provided it was given in small doses. He thought there was no difficulty whatever in doses of .1 gram. With regard to the girdle pains these were frequently found after the administration of salvarsan, and it was suggested that the condition might be caused by an inflammatory reaction set up by the spirochæte being set free.

DR. CROFTON referred to a case of keratitis in which spinal symptoms developed after the second dose of "606," but on the third dose being given these symptoms cleared up. He knew of a case of tabes in which the symptoms were very intense, but almost entirely disappeared after a course of sulphur baths.

THE PRESIDENT asked if any one present had experience of intervenous injections of mercury on the same lines as salvarsan. He thought they would be worth trying in cases where there was any doubt about the use of "606." There was no evidence that a large dose of mercury had very much effect on the nerve centres, and it might have a destructive effect on the spirochæte.

DR. MOORHEAD, in replying, said he did not think that

repeated doses of "606" were of much use, and he had come to the conclusion that doses of .1 gram were entirely useless. He noticed that the tendency now with regard to the administration of salvarsan was towards larger doses. He was contemplating a further dose of .4 gram for this patient, and she was anxious to have it.

Foot and Mouth Disease in Man—Aphthous Fever.

DR. C. M. O'BRIEN read a paper on this subject. His patient—a veterinary inspector to the Irish Agricultural Department—while in discharge of his duty on the 9th of July, 1912, was bitten by a sheep on the index finger of the left hand while examining the beast for suspected foot and mouth disease on an infected farm at Swords, Co. Dublin. Having applied an antiseptic dressing to the wounded finger, he continued his daily examinations. About three weeks later the wound appeared to form an abscess to which he applied an abscess knife with every antiseptic precaution. There was no pus found, pain continued, and the wound refused to heal. As his colleagues of the Department were all fully occupied coping with the outbreak, and as his services as a result were badly needed, he declined to lie up, although asked to do so. On the morning of the 11th of August redness and swelling appeared on both hands, accompanied by itching of the parts, with a few small, raised, white swellings like little lumps under the skin, especially in the clefts of the fingers. By night time slight itching of upper part of both feet, with a prickly sensation in both soles, the latter becoming worse on walking. He complained of malaise for a day or two previously. G. J. B., aged thirty-five, married, consulted Dr. O'Brien on the 12th of August, and, in addition to the foregoing particulars, said he always enjoyed excellent health excepting for an attack of scarlet fever which he contracted at the age of ten. On examination the fingers and dorsal aspect of both hands were markedly swollen and covered with a dull, reddish, raised rash, extending to an inch above both wrists. On close examination vesicles in process of formation were observable here and there over the surface of the rash, especially between the fingers and round the nails. Itching was complained of. On removing the dressing from the injured finger the wound gaped, but no pus exuded even on

making considerable pressure. There was no perceptible involvement of the lymphatic glands. The throat was congested, and a few vesicles were observable on the fauces. Vesicles were also in evidence on the inside of the lips, gums, and side of tongue. The tongue was swollen and somewhat tender. Speech, deglutition, and mastication were painful. Saliva copious. Temperature 100° , and never exceeded this. Kidney secretion normal; internal organs healthy; reflexes normal. On the 13th of August all the foregoing symptoms were increased, saliva trickled from the mouth, rash on dorsal aspects of both feet, similar to that previously described on hands, stopping short above both ankles. Ruptured vesicles on fauces now gave rise to small shallow ulcers, with dark red base. Temperature 99.5° . Sir Charles A. Cameron, C.B., and Sir Thomas Myles saw the case in consultation with Dr. O'Brien. The patient made an uninterrupted recovery, and, although not quite up to normal standard of physical energy, he resumed professional duty within two months. Dr. O'Brien in his paper dealt very fully with the literature of foot and mouth disease in man from the first recorded case in 1695 down to the present, and although he claimed no triumph over any one of the many mysteries which surround its bacteriology, nevertheless he maintains the notes of this case constitute a clinical picture which *tout ensemble* is not easily counterfeited by any other disease.

PROFESSOR METTAM said that the possibility of infection in man was well known for the past couple of hundred years. The first authentic case of foot and mouth disease occurring in man was recorded about the middle of the eighteenth century, and since then from time to time similar cases have been reported. The incidence of the disease was much greater on the Continent than in these islands, and it was most formidable in Russia and France. That the disease does occur in man there could be little doubt. There was a case on record in which the disease was produced in a calf by inoculation with the pus taken from a vesicle on a boy. In 1880 there was a large outbreak amongst persons in Dover who had consumed the milk of cows suffering from foot and mouth disease, and at the time it was noticed that the incidence of the disease was greater amongst those who had used the cream. He referred to the difficulty experi-

enced in the diagnosis of this disease where the germ is not known, and pointed out that no observer had yet succeeded in isolating the germ that gave rise to foot and mouth disease; but that it was of a very virulent nature was certain, as a 300th part of a c.c. of the pus taken from a vesicle was capable of setting up a lesion in cattle. In cattle the lesions were typical, and there was very little difficulty in arriving at a diagnosis. The vesicles came up quickly and rapidly broke, leaving the corium exposed. Animals affected with the disease exhibit a good deal of pain. Lesions often occur in the mammary gland, and it was probably in this way that the infection was carried to the milk. The disease was not very serious from the point of view of mortality amongst oxen, as it was found that the death-rate amounted to only about 1 per cent., but there was a rapid loss of condition which, together with the loss of market, accounted for the dread with which the farmers looked on the disease. Referring to the period of incubation, which in the case just reported was said to be about eight days, the period of incubation in the lower animals was generally given as from two to four days. It was found that as soon as the vesicles ruptured the temperature goes down and the lesions rapidly heal. Within a week or so there is an epithelial covering to the corium, and as soon as this takes place infection has passed. Had he seen Dr. O'Brien's patient he would have been in a position to give an opinion as to whether it was like the disease in the lower animals.

SECTION OF OBSTETRICS.

President—A. J. HORNE, F.R.C.P.I.

Sectional Secretary—G. FITZGIBBON, M.D., F.R.C.P.I.

Friday, February 7, 1913.

THE PRESIDENT in the Chair.

Two Cases of Rupture of the Uterus.

DR. MADILL said his first case was a patient, 5-para, aged thirty-four, who was sent into hospital in a collapsed state on the 18th of October, 1912. She gave a history of having fallen into labour nine hours previously. Her pains in-

creased in strength for about seven hours, when she got a very severe pain, after which all pains ceased. She was shortly after sent into hospital, and on examination the foetus could be easily palpated in the abdominal cavity. On opening the abdomen the foetus was found to have left the uterus—all except the head—through a large rent extending from a third way up the uterus on the left downwards and outwards along the base of the left broad ligament. The placenta was loose in the uterus, and there was a good deal of intraperitoneal hæmorrhage. Supravaginal hysterectomy was done and the patient recovered.

The second case was that of a patient aged thirty-two, and a 6-para. Previous labours normal. Her history was that she had been having pains off and on for a fortnight, at the end of which time the doctor tried to apply forceps three times but failed. She was then sent into hospital in a moribund state. Palpation showed the case to be one of ruptured uterus with the foetus free in the peritoneal cavity. The extremely collapsed condition of the patient prevented immediate operation; but after administering stimulants, &c., for four hours a pulse was faintly perceptible at the wrist, and it was decided to operate, though the case was well nigh hopeless. When the abdomen was opened both foetus and placenta were found to have left the uterus, and an enormous rent was discovered on the right side of the uterus extending down and half-way across the cervix in front and behind. There was a great deal of intra- and sub-peritoneal hæmorrhage. The bladder was badly torn. Hysterectomy was done as rapidly as possible, but the patient succumbed just as the operation was concluded.

In Case II. the cause of obstruction was hydrocephalus, the baby in addition weighing $9\frac{1}{2}$ lbs. In Case I. the patient had a very pendulous abdomen, and obstruction was probably due to the misdirection of the uterine contractions against the promontory instead of through the brim. This view is supported by the fact that the foetus showed evidences of an anterior parietal presentation.

THE PRESIDENT said that the Section was indebted to Dr. Madill for bringing forward these two interesting cases. Rupture of the uterus was sufficiently uncommon to make the cases of interest, and it raised many points of interest as regards treatment.

DR. JELLETT said that a point of interest in connection with Dr. Madill's first case was that he had successfully operated on a patient although the child had passed from the uterus into the peritoneal cavity. It had been stated by a well-known obstetrician that he had never seen a case of uterine rupture such as this where the patient was saved. He (Dr. Jellett) had reported a similar case to this Section during the last session. In that case the same treatment was adopted as Dr. Madill had adopted, and the patient got perfectly well.

DR. SHEILL said that he had sent in one of the patients referred to, and that it was his intention later on to bring forward some notes of the case in a short paper, together with another somewhat similar case, which he hoped would be of interest.

DR. SOLOMONS said that in these cases it was extremely difficult for those who had not seen the patients to form any opinion as to the treatment. He had seen a good many such cases, but he particularly referred to one to which he had been called in the Extern Maternity Department of the Rotunda Hospital. In this, rupture of the uterus had resulted from a neglected brow presentation, and the body of the child was in the abdominal cavity. The child was delivered by forceps, the placenta manually removed, and the rent in the uterus plugged with iodoform gauze. The patient got quite well. Various modes of treatment have from time to time been reported as successful, but it seemed nearly impossible to lay down a definite treatment without seeing the individual case. He suggested that the symptoms present should be the guide as to the treatment.

DR. PUREFOY said he was fortunate in having seen and assisted with these two patients. He thought that if there was one thing certain about the treatment of rupture of the uterus it was that no hard and fast rule can be laid down except the general principle acted upon in these two instances. Sometimes it is probably shorter and involves less shock to remove the uterus than to engage in the longer procedure of repairing the rents in it. He considered it proper that all these cases should be brought forward, as most handbooks are quite calculated to lead younger members of the profession to believe that warning symptoms precede the catastrophe. It is well to be reminded that

rupture occurs sometimes without any of the usual signs, even in women who have gone through previous labours without any particular risks.

Wertheim's Hysterectomy.

DR. E. H. TWEEDY, in exhibiting a specimen, said it was a case of cancer of the uterus which was remarkable in many ways. It occurred in a patient aged thirty-eight. When she first consulted him she stated that she fainted the night before from hæmorrhage. She attributed the hæmorrhage to being a "bleeder," but he pointed out to her that although hæmophilia may be transmitted by the female the disease was one from which the male only suffered. The patient was plugged and brought into hospital. She, however, continued to bleed freely. On examination he found the entire lip of the cervix malignant. She was curetted, but very little came away. There was no pain nor history of discharge. She had been using Condyl's Fluid. The uterus was mobile, and ulceration had not taken place. There was no cachexia. Hysterectomy was performed, and on opening the uterus a small myoma was found with a blood clot round it which was the cause of the bleeding. But for this myoma the patient would not have come up with the cancer. Just before closing the abdomen a mass of very adherent glands were found. He pointed out the case was one such as might have been put down as a very early case, yet at operation glands were discovered far away from the original growth.

DR. PUREFOY said the Section was indebted to Dr. Tweedy for his very interesting case. The association of malignant disease with uterine fibroids was a matter of interest. He did not know if statistics showed that the uterus which was the seat of a fibroid is more likely to become the seat of malignant disease. It has long been believed that malignant disease affecting the cervix uteri becomes a danger to life early in the progress of the case, and the implication of distant glands in this patient confirms that view.

The Surgical Treatment of Pelvic Thrombosis of Septic Origin.

DR. JELLETT read a paper on this subject. It dealt first with the essential differences between acute and chronic

pyæmia. Dr. Jellett referred to a case that had died last year in the Rotunda Hospital of pyæmia with thrombosis of the ovarian vein, as shown at the *post-mortem* examination. He consequently decided to operate on future cases of a similar kind. He then recorded three such cases, in all of which the initial history was characterised by recurrent rigors, high temperature, and rapid pulse. In the first case, on the fifteenth day, a swelling was found in the right broad ligament. He opened the abdomen and removed a large thrombosed and suppurating ovarian vein, round which was a considerable amount of cellulitis. The patient rapidly got well. In the second case he did not operate until the thirty-ninth day, as, owing to absence from the hospital, he had not seen the patient before. In this case he removed a tense, cord-like structure which turned out to be a thrombosed ovarian artery, and also removed the ovarian vein, which contained a small thrombus in its lower part. In this case the patient had a few rigors after the operation, but then they disappeared, and her temperature fell to normal and remained so. In the third case a very similar condition to that met with in the first was found at operation, except that it had gone much further. Septic peritonitis was on the point of starting, the whole length of the ovarian vein contained pus, and there were two abscesses beside the vein. The patient improved for a few days after the operation, then gradually lapsed, until on the thirtieth day after confinement she was as bad as before the operation. From her symptoms at that time she was believed to have thrombosis in the internal iliac vein, and the abdomen was opened with the object of tying it. Thrombosis, however, was not found in this vein, but there was apparently thrombosis and suppuration in the uterine vessels on the right side, and so a hysterectomy was done. The patient improved temporarily, but rapidly became again seriously ill, and died on the thirty-fifth day with symptoms of septic involvement of the lungs. In conclusion Dr. Jellett referred to the interesting fact that in all his cases the thrombosis was on the right side, and primarily in the ovarian vein alone. Consequently, they were favourable cases for operation. He considered that such cases called for operation always, and that it should be as early as possible to anticipate conditions such as were found in the third case. He considered the diagnosis was

the important point, and that, as a rule, one could make it from the symptoms of the patient, taken in connection with thickening or swelling in the broad ligaments, and associated with the comparatively little pain or tenderness.

PROFESSOR ALFRED SMITH said that anything which goes to advance knowledge of the operative treatment for thrombosis of the pelvic veins represented a distinct step. Dr. Jellett was to be congratulated in having got within a comparatively short period so many cases, and that he was justified in performing the operation. Could they, from listening to the paper, draw any conclusions which would be helpful in future practice? The opinion amongst those who had operated seemed to depend more on the conditions found bi-manually than on the rise of temperature and comparatively slow pulse—*i.e.*, the frequency with which the ovarian vein was thrombosed was interesting, and he raised the point that it was possible that if infection was spread from the placental site it was carried through the ovarian vein. Taylor, of Birmingham, suggested that in suitable cases operation should be by the vaginal route, and he (Dr. Smith) considered Taylor remarkably successful in the cases in which he operated.

DR. SHEILL said there were many points of interest, and he thought not the least was the one which refers to the fact of infection taking place more frequently on the right side than on the left. He suggested that this was attributable to the fact that most examiners were right-handed, and the tendency was for the examining finger to be brought to the right side of the patient, and that possibly ulceration of the cervix might have taken up the infection thus.

MR. PEARSON said, speaking from the point of view of the general surgeon, he considered that the paper might as well have been brought before the Section of Surgery. He considered that the operation was justified whether there was thrombosis present or not. He was struck by Dr. Jellett's remark when discussing the diagnosis—*i.e.*, that two other conditions might be taken for it—but he considered that in either of the conditions suggested operation was also indicated. On anatomical grounds it was to be expected that the uterine vessels would be open to infection more than the ovarian veins. With regard to the technique, it should be borne in mind that before proceeding to follow up the veins

the first step should be to expose the ovarian vein where it entered the vena cava or left renal vein and divide it. It was, he thought, important to start as far away as possible from the focus of infection. There was a great danger of embolism if the general circulation was not shut off before attacking the septic parts. He noticed that the cases in which thrombosis existed were apparently more favourable than where there was no clot in the vein. This was probably due to the virulence of the organism present preventing thrombosis in the severer cases. He had found vaccines of little use in cases of acute infection, and it seemed to him irrational to give a vaccine in acute sepsis, but he had seen serum do good in several cases. After-treatment he considered as important as operation. Important after-treatment appeared to be to saturate with as much liquid as possible, so as to get the kidneys to excrete the toxins and thereby wash out the whole system.

DR. ROWLETTE said that Dr. Jellett spoke of the generally unsatisfactory results of vaccines in cases of thrombosis, and he agreed with him that they were usually unsatisfactory, but that this experience was curiously in contrast with the American reports, in which the results were said to be excellent in cases of thrombosis as compared with the results in sepsis without thrombosis. He thought that the reason for our results being unsatisfactory was that in nearly every case of thrombosis there was a mixed infection. He had recently, however, experienced two cases where vaccine was the only treatment adopted, and was successful. One was a case of acute puerperal melancholia and pyæmia, and an autogenous *Staphylococcus aureus* vaccine was given with quite satisfactory results. The second case was much more serious, and one in which he thought at first that any treatment would be hopeless. There was thrombosis, and there were infarcts in the lungs, and in the opinion of those in charge of the case the patient was hopelessly ill when the treatment was started. The question of an exploratory operation with a view to removing veins was discussed, but the conclusion arrived at was that an anæsthetic would cause immediate death. A growth of streptococci was obtained from the venous blood and a vaccine prepared. The temperature and pulse came down step by step, and the general condition improved. In a week the patient was convalescent, and

though an attack of pleurisy supervened she recovered completely. It was one of the worst cases of puerperal sepsis he had ever seen. His experience of vaccines in acute cases of sepsis had been more favourable than Mr. Pearson's.

DR. PUREFOY said that he had seen one of these cases in the beginning of the illness, and her aspect and condition then were not such as to cause anxiety. There was local pain and slight tenderness, but the symptoms remitted so much during the two following days he thought that the prognosis was favourable. The paper was a very valuable addition to the communications made elsewhere on the subject, as it might be inferred that these cases never recovered under any treatment. He considered that Dr. Jellett was correct in stating that 60 or 70 per cent. did not recover. The most interesting case was that in which the ovarian artery showed marked degenerative changes. This has not been previously recorded. Two recent writers mention three cases of the kind in which operation was carried out without success, and they laid down the principle that where organisms were found in the patient only during rigor, operation was indicated and would probably be successful; but where the organisms are found at any other time operation is not indicated. Dr. Jellett stated that cellulitis does occur without thrombosis in the affected area. He (Dr. Purefoy) thought that this statement lacks confirmation.

DR. JELLETT, in replying to the remarks, said he did not mean to suggest that no cases of pyæmia recovered. What he did suggest, and what he thought most people would substantiate, was that if you have got the condition of thrombosis of veins with suppuration the mortality must be something near 100 per cent. He was glad the point was raised about cellulitis by Dr. Purefoy, and this brought him to the point raised by Dr. Pearson that infection started outside the vein and then got into it. What he was inclined to think was that in the case of cellulitis one has first an infection passing into the connective tissue, say from a torn cervix. This starts cellulitis, and as the result of the latter there may or may not be some thrombosis in the veins. He considered that in septic thrombosis, on the other hand, the infection passed straight into the open veins from the placental site. It had

been questioned whether it was better to attack the thrombosed ovarian vein from below or from above. In the majority of cases he thought the trans-peritoneal operation was the better. He was indebted to Dr. Pearson for his remarks about the ligature on the upper part of the ovarian vein. He considered that Dr. Sheill's suggestion might account for infection of the vaginal mucous membrane, but it would not account for infection of the placental site. In conclusion, he recognised that the question of operation in these cases is still one for very grave discussion, but that in cases such as those he brought forward it was positively indicated.

THE GOLDEN GATE.

There's a far off shadowy shore,
That is reached by a narrow strait;
'Tis the land of the EVERMORE,
And the strait is the Golden Gate.

When we reach the Harbour of God
(By a law that's inviolate),
We cast off humanity's load,
As we pass through the Golden Gate.

In that harbour of God—our goal
Which His love doth illuminate,
There's an anchor for every soul,
That has passed through the Golden Gate.

And the seafarers all who come—
Be they travellers early or late—
Have their rest and eternal home
'Neath the light of the Golden Gate.

H. Macnaughton-Jones.

SANITARY AND METEOROLOGICAL NOTES.

VITAL STATISTICS

For four weeks ending Saturday, February 22, 1913.

IRELAND.

THE average annual death-rate represented by the deaths—exclusive of deaths of persons admitted into public institutions from without the respective districts—registered in the week ended February 22, 1913, in the Dublin Registration Area and the twenty-six principal provincial Urban Districts of Ireland was 24.1 per 1,000 of their aggregate population, which for the purposes of these returns is estimated at 1,199,180. The deaths registered in each of the four weeks of the period ending on Saturday, February 22, and during the whole of that period in certain of the districts, alphabetically arranged, correspond to the following annual rates per 1,000 :—

COUNTY BOROUGH, &c.	Week ending				Average Rate for 4 weeks
	Feb. 1	Feb. 8	Feb. 15	Feb. 22	
27 Town Districts	20.4	20.9	21.3	24.1	21.7
Dublin Reg. Area ...	18.8	17.7	21.7	25.1	20.8
Dublin City	19.8	18.1	21.0	25.9	21.2
Belfast	22.9	23.2	19.9	25.4	22.8
Cork	32.6	22.4	29.2	23.8	27.0
Londonderry	19.1	20.3	19.1	19.1	19.4
Limerick	17.6	16.2	17.6	17.6	17.3
Waterford	7.6	26.6	26.6	20.9	20.4

The deaths (excluding those of persons admitted into public institutions from without the respective districts) from certain epidemic diseases registered in the 27 districts during the week ended Saturday, February 22, 1913, were equal to an annual rate of 1.6 per 1,000. Among the 193 deaths from all causes for Belfast are 6 from measles, 2 from scarlet fever, 1 from whooping-cough, 2 from diphtheria, 3 from diarrhoea and

enteritis of children under 2 years of age, and one from cerebro-spinal fever. One of the 13 deaths from all causes for Limerick is from measles. Among the 11 deaths from all causes for Waterford are 2 from whooping-cough. Of the 4 deaths from all causes for Galway one is from enteric fever. One death from measles is included in the 8 deaths from all causes for Lisburn. Among the 12 deaths from all causes for Newry are one from enteric fever and 2 from measles. One of the 5 deaths from all causes for Tralee is from measles, and one of the 3 deaths from all causes for Clonmel is from whooping-cough.

DUBLIN REGISTRATION AREA.

The Dublin Registration Area consists of the City of Dublin, as extended by the Dublin Corporation Act, 1900, together with the Urban Districts of Rathmines, Pembroke, Blackrock and Kingstown. The population of this area is 403,000; that of the City being 308,187, Rathmines 38,769, Pembroke 29,942, Blackrock 9,161, and Kingstown 16,941.

In the Dublin Registration Area the births registered during the week ended February 22 amounted to 210—101 boys and 109 girls—and the deaths to 200—101 males and 99 females.

DEATHS.

The registered deaths, omitting the deaths (numbering 6) of persons admitted into public institutions from localities outside the Area, represent an annual rate of mortality of 25.1 per 1,000 of the population. During the eight weeks ending with Saturday, February 22, the death-rate averaged 21.4, and was 3.8 below the mean rate for the corresponding portions of the 10 years 1903–1912.

The total deaths registered, numbering 200, represent an annual rate of 25.9 per 1,000. The annual rate for the past eight weeks was 22.7 per 1,000, and the average annual rate for the corresponding periods of the past ten years was 26.4 per 1,000 of the mean population for all deaths registered.

The total deaths from all causes included 1 from enteric fever, 1 from scarlet fever, 4 from whooping-cough, 2 from diphtheria, 5 from influenza, and 6 of children under 2 years of age from diarrhoea and enteritis.

In each of the 3 preceding weeks, deaths from enteric fever

were 0, 1, and 0 ; deaths from scarlet fever were 0, 1, and 1 ; deaths from whooping-cough were 1, 2, and 2 ; deaths from diphtheria were 0, 1, and 1 ; deaths from influenza were 2, 3, and 2 ; and deaths of children under 2 years of age from diarrhœa and enteritis were 5, 2, and 4.

There were 50 deaths from tuberculous disease. This number includes 37 deaths from pulmonary tuberculosis, 4 from tuberculous meningitis, 4 from abdominal tuberculosis, 1 from tuberculosis of the vertebral column, 1 from tuberculosis of other organs, and 3 from disseminated tuberculosis. In each of the 3 preceding weeks deaths from tuberculous disease numbered 19, 32, and 34.

Broncho-pneumonia caused 11 deaths, and pneumonia (type not distinguished) caused 6 deaths.

Organic diseases of the heart caused the deaths of 12 persons, and 21 deaths from bronchitis were recorded.

Seven deaths were caused by cancer.

The deaths of 2 infants under one year of age were caused by convulsions, those of 7 infants by congenital debility, those of 2 infants by congenital malformation, and those of 5 through premature birth.

There were 4 accidental deaths, including 1 by drowning, 1 by a railway accident, and 1 death of a child aged 12 years from burns.

In 6 instances the cause of death was "uncertified," there having been no medical attendant during the last illness. These cases include the deaths of 2 infants under one year of age, and the death of a person aged 70 years.

Sixty-one of the persons whose deaths were registered during the week ended February 22 were under 5 years of age (38 being infants under one year, of whom 12 were under one month old), and 36 were aged 65 years and upwards, including 24 persons aged 70 and upwards. Among the latter were 12 aged 75 years and upwards, of whom 2 (a male and a female) were stated to have been aged 95 and 98 years respectively.

STATE OF INFECTIOUS DISEASE IN THE DUBLIN REGISTRATION AREA AND IN BELFAST.

The usual returns of the number of cases of infectious diseases notified under the "Infectious Diseases (Notification) Act, 1889," and the "Tuberculosis Prevention (Ireland) Act,

1908," as set forth in the following table, have been furnished by Sir Charles A. Cameron, C.B., M.D., Medical Superintendent Officer of Health for the City of Dublin; by Mr. Fawcett, Executive Sanitary Officer for Rathmines and Rathgar Urban District; by Mr. Manly, Executive Sanitary Officer for Pembroke Urban District; by Mr. Heron, Executive Sanitary Officer for Blackrock Urban District; by the Executive Sanitary Officer for Kingstown Urban District; and by Dr. Bailie, Medical Superintendent Officer of Health for the City of Belfast.

TABLE SHOWING THE NUMBER OF CASES OF INFECTIOUS DISEASES notified in the Dublin Registration Area (viz.—the City of Dublin and the Urban Districts of Rathmines and Rathgar, Pembroke, Blackrock, and Kingstown), and in the City of Belfast, during the week ended February 22, 1913, and during each of the preceding three weeks. An asterisk (*) denotes that the disease in question is not notifiable in the District.

CITIES AND URBAN DISTRICTS	Week ending	Measles	Rubella, or Epidemic Rose Rash	Scarlet Fever	Typhus	Relapsing Fever	Diphtheria	Membranous Group	Pyrexia (origin uncertain) <i>a</i>	Enteric or Typhoid Fever	Erysipelas	Puerperal Fever	Whooping-cough	Cerebro-spinal Fever	Tuberculous Phthisis (<i>Phthisis</i>)	Acute Poliomyelitis	Total
City of Dublin	Feb. 1	•	•	12	2	-	5	-	1	4	6	1	•	-	11	-	42
	Feb. 8	•	•	12	-	-	4	-	-	7	-	-	•	-	2	-	33
	Feb. 15	•	•	9	-	-	10	-	-	6	9	-	•	-	17	-	51
	Feb. 22	•	•	9	1	-	4	-	-	11	3	-	•	-	14	-	42
Rathmines and Rathgar Urban District	Feb. 1	•	•	2	-	-	2	-	-	-	1	-	•	•	•	•	5
	Feb. 8	•	•	-	-	-	-	-	-	-	1	-	•	•	•	•	1
	Feb. 15	•	•	6	-	-	-	-	-	-	-	-	•	•	•	•	6
	Feb. 22	•	•	-	-	-	1	-	-	-	-	-	•	•	•	•	1
Pembroke Urban District	Feb. 1	-	-	1	-	-	-	-	-	-	1	-	1	•	-	•	3
	Feb. 8	-	-	1	-	-	6	-	-	-	-	-	1	•	-	•	8
	Feb. 15	2	-	1	-	-	-	-	-	-	-	-	2	•	-	•	5
	Feb. 22	2	-	2	-	-	3	-	-	-	-	-	1	•	-	•	8
Blackrock Urban District	Feb. 1	•	•	1	-	-	-	-	-	-	-	-	•	-	•	•	1
	Feb. 8	•	•	-	-	-	-	-	-	-	-	-	•	-	•	•	-
	Feb. 15	•	•	-	-	-	-	-	-	-	-	-	•	-	•	•	-
	Feb. 22	•	•	-	-	-	1	-	-	-	1	-	•	-	•	•	2
Kingstown Urban District	Feb. 1	•	•	1	-	-	1	-	-	-	1	-	•	•	1	•	4
	Feb. 8	•	•	-	-	-	1	-	-	1	-	1	•	•	2	•	5
	Feb. 15	•	•	1	-	-	-	-	-	-	-	-	•	•	-	•	1
	Feb. 22	•	•	-	-	-	-	-	-	-	1	-	•	•	2	•	3
City of Belfast	Feb. 1	•	•	13	-	-	9	-	1	3	2	1	•	•	17	•	46
	Feb. 8	•	•	23	-	-	7	1	-	2	2	1	•	•	6	•	42
	Feb. 15	•	•	23	-	-	11	-	-	6	6	-	•	•	7	•	53
	Feb. 22	•	•	24	-	-	6	-	1b	2	13	1	•	•	10	•	57

a Continued Fever.

b This case has developed typhoid fever.

CASES OF INFECTIOUS DISEASES UNDER TREATMENT IN DUBLIN HOSPITALS.

During the week ended February 22, 1913, 1 case of measles was admitted to hospital, 2 were discharged and 2 cases

remained under treatment at the close of the week. In the three preceding weeks such cases were 4, 3, and 3 respectively.

Twenty cases of scarlet fever were admitted to hospital, 21 were discharged, there was one death, and 128 cases remained under treatment at the close of the week. This number is exclusive of 22 convalescent patients who remained under treatment at Beneavin, Glasnevin, the Convalescent Home of Cork Street Fever Hospital, Dublin. At the close of the 3 preceding weeks the cases in hospital were 116, 124, and 130 respectively.

Eight cases of diphtheria were admitted to hospital, 16 were discharged, and there were 2 deaths. The cases in hospital, which at the close of the 3 preceding weeks numbered 41, 45, and 44 respectively, were 34 at the close of the week.

Eight cases of enteric fever were admitted to hospital, 2 were discharged, there were 2 deaths, and 31 cases remained under treatment in hospital at the close of the week, the respective numbers in hospital at the close of the 3 preceding weeks being 23, 23, and 27.

Two cases of typhus were admitted to hospital during the week, one was discharged, there was one death, and 10 cases remained under treatment at the close of the week.

In addition to the above-named diseases, 6 cases of pneumonia were admitted to hospital, 9 were discharged, there was 1 death, and 23 cases remained under treatment at the end of the week.

ENGLAND AND SCOTLAND.

The mortality in the week ended Saturday, February 22, in 96 large English towns (including London, in which the rate was 18.2) was equal to an average annual death-rate of 17.3 per 1,000 persons living. The average rate for 16 principal towns of Scotland was 18.7 per 1,000, the rate for Glasgow being 19.8, and that for Edinburgh 15.3.

INFECTIOUS DISEASE IN EDINBURGH.

The Registrar-General has been favoured by A. Maxwell Williamson, M.D., B.Sc., Medical Officer of Health for Edinburgh, with a copy of his Return of Infectious Diseases notified during the week ended February 22. From this Report it appears that of a total of 57 cases notified, 25 were of phthisis,

21 of scarlet fever, 6 of diphtheria, and 5 of erysipelas. Among the 395 cases of infectious diseases in hospital at the close of the week were 151 cases of scarlet fever, 115 of phthisis, 40 of whooping-cough, 31 of measles, 25 of diphtheria, 9 of erysipelas, 5 of enteric fever, 4 of chicken-pox, and one of puerperal fever.

METEOROLOGY.

Abstract of Observations made in the City of Dublin, Lat. 53° 20' N., Long. 6° 15' W., for the Month of February, 1913.

Mean Height of Barometer, - - -	30.088 inches.
Maximal Height of Barometer (12th, at 9 a.m.),	30.624 „
Minimal Height of Barometer (7th, at 6 30 p.m.),	29.162 „
Mean Dry-bulb Temperature, - - -	42.7°.
Mean Wet-bulb Temperature, - - -	40.5°.
Mean Dew-point Temperature, - - -	37.9°.
Mean Elastic Force (Tension) of Aqueous Vapour,	.233 inch.
Mean Humidity, - - -	83.9 per cent.
Highest Temperature in Shade (on 7th), -	56.1°.
Lowest Temperature in Shade (on 14th), -	32.3°.
Lowest Temperature on Grass (Radiation) (14th)	29.7°.
Mean Amount of Cloud, - - -	61.3 per cent.
Rainfall (on 12 days), - - -	.602 inch.
Greatest Daily Rainfall (on 24th), - -	.149 inch.
General Directions of Wind, - - -	S.W., W., E.,

Remarks.

Although rain fell daily on the first nine days of the month, February proved fine, dry, and on the whole mild. In the third week, however, easterly winds prevailed, blowing strongly and with bitter coldness. The month had opened with low pressures in the vicinity of Iceland, steep gradients for S.W. winds on the Atlantic between that island and the British Isles, and mild, showery, blustering weather. On the mornings of the 3rd and 7th the barometer was below 28.4 inches off the south coast of Ireland. In the course of the latter day a very energetic secondary depression passed rapidly north-eastward along the western shores of Ireland and Scotland. It caused violent S.W. gales in nearly all parts of Great Britain and

Ireland, and at 5 a.m. of the 8th a squall of hurricane force passed over Aberdeen, the wind blowing at the rate of 76 miles per hour. A change began on Sunday, the 9th, when an anticyclone began to spread westward from Central Europe. By the morning of the 11th the British Isles had come within the borders of this system, and its calms and resulting chill covered the country with dense fogs. The meteorological feature of the morning of the 13th was the vast extent of fog area which covered the east of Ireland, nearly the whole of England and Wales, and the Continent as far as Bavaria and the North of Denmark. Next morning fog was again very prevalent between the N.W. of Spain and the south of Norway—in places it was dense and wet, yielding appreciable measurements in the rain-gauges. It was not until the morning of the 16th that the fog dispersed as an easterly to north-easterly wind sprang up, bringing very cold dry weather to all parts. On the Continent there was a severe and steady frost at that time. The last change began in the west of Ireland on Sunday, the 23rd, when a large depression spread in from the Atlantic, bringing in its train clouds, milder southerly winds, and rain, which was heavy in Munster and Connaught.

In Dublin the mean temperature (43.4°) was 1.0 above the average (42.4°). The mean dry-bulb readings at 9 a.m. and 9 p.m. were 42.7° . In the forty-nine years ending with 1913, February was coldest in 1895 (M. T. = 34.2°), and warmest in 1903 (M. T. = 47.5°). In 1912 the mean temperature was 43.7° .

The mean height of the barometer was 30.088 inches, or 0.233 inch above the average value for February—namely, 29.855 inches. The mercury rose to 30.624 inches at 9 a.m. of the 12th and fell to 29.162 inches at 6 30 p.m. of the 7th. The observed range of atmospheric pressure was, therefore, 1.462 inches.

The mean temperature deduced from daily readings of the dry-bulb thermometer at 9 a.m. and 9 p.m. was 42.7° , or 0.1° above the value for January, 1913. Using the formula, *Mean Temp.* = *Min.* + (*Max.* — *Min.*) $\times .50$, the M. T. is 43.4° , compared with a thirty-five years' (1871–1905) average of 42.4° . On the 7th the thermometer in the screen rose to 56.1° —wind, S.W., blowing a violent gale; on the 14th it fell to 32.3° —wind, W. The minimum on the grass was 29.7° on the 14th.

The rainfall was .602 inch, distributed over 12 days. The average rainfall for February in the thirty-five years, 1871–1905, inclusive, was 2.010 inches, and the average number of rain-days was 15. The rainfall, therefore, and also the rain-days were much below the average. In 1883 the rainfall in February was large—3.752 inches on 17 days; in 1879 also 3.706 inches fell on 23 days. On the other hand, in 1891, only .042 inch was measured on but 2 days. In 1912, 2.562 inches fell on 18 days.

Fog occurred on the 11th and four following days, and also on the 28th. The amount of cloud—61.3 per cent.—was under the average—66 per cent. High winds were noted on 7 days, and reached the force of a violent gale on the 7th. Hail fell on the 20th.

The temperature reached or exceeded 50° in the screen on 12 days, and fell to 32° on only 1 night. The minima on the grass were 32° or less on only 2 nights, compared with every night in 1895. The thermometer failed to rise to 40° in the screen in the daytime on the 1st. The highest minimum was 46.9° on the 3rd.

In Dublin the rainfall up to February 28th amounted to 6.178 inches on 33 days, compared with a thirty-five years' (1871–1905) average of 4.220 inches on 33 days.

At the Normal Climatological Station in Trinity College, Dublin, Mr. C. D. Clark reports that the mean height of the barometer was 30.110 inches. The range of atmospheric pressure was between 30.62 inches at 9 p.m. of the 11th and 29.47 inches at 9 p.m. of the 7th. The mean value of the readings of the dry-bulb thermometer at 9 a.m. and 9 p.m. was 43.3°. The arithmetical mean of the daily maximal and minimal temperatures was 43.3°. The screened thermometers rose to 57° on the 7th, and fell to 31° on the 14th. On the 17th the grass minimum was 22°. Rain fell on 10 days to the amount of .52 inch, the greatest fall in 24 hours being .13 inch on the 24th. The duration of bright sunshine, according to the Campbell-Stokes recorder, was 38.0 hours, of which 5.1 hours occurred on the 19th. The mean daily duration of bright sunshine was 1.4 hours. The mean earth temperatures were—at 1 ft., 42.0°; at 4 ft., 44.3°.

The rainfall at Ardgillan, Balbriggan, Co. Dublin, measured by Captain Edward Taylor, D.L., was .70 inch on 12 days. This amount was 1.24 inches less than the average, and the rain-days were 2 in defect. The largest fall in 24 hours was .14 inch on the 24th. From January 1 to February 28, inclusive, 5.78 inches of rain fell on 32 days—the difference in excess of the average fall being 2.15 inches, whereas the rain-days were 1 below the average. The thermometers in the shade rose to 55.0° on the 7th, and fell to 29.4° on the 14th.

Mr. T. Bateman reports that the rainfall at The Green, Malahide, Co. Dublin, was .495 inch on 14 days. The greatest fall in 24 hours was .115 inch on the 14th. The mean shade temperature was 39.4° , the extremes being—highest, 53.5° on the 5th; lowest, 27° , on the 1st.

At the Ordnance Survey Office, Phoenix Park, the rainfall was .720 inch on 12 days, the maximal measurement in 24 hours being .135 inch on the 25th. The total amount of bright sunshine was 45.1 hours, the greatest daily duration being 5.7 hours on the 19th.

The rainfall at Leeson Park, Dublin, is given by Dr. C. Joynt, F.R.C.P.I., at .555 inch on 12 days, .160 inch having been measured on the 24th.

At the Cheeverstown Convalescent Home for Little Children of the Poor, Clondalkin, Co. Dublin, Miss C. Violet Kirkpatrick recorded a rainfall of 1.16 inches on 11 days, the largest fall in 24 hours being .29 inch on the 1st.

Dr. Arthur S. Goff reports that at Belfort Houee, Dundrum, Co. Dublin, rain fell on 12 days to the amount of .95 inch, the greatest daily fall being .26 inch on the 24th. In the 10 years 1901–1910, the average rainfall in February at Lynton was 2.232 inches on 15 days. The temperature in the shade ranged from 57° on the 7th to 30° on the 14th. The mean temperature in the screen was 43.0° .

Mr. George B. Edmondson recorded a rainfall of .95 inch on 13 days at Manor Mill Lodge, Dundrum, Co. Dublin, the largest measurement in 24 hours being .23 inch on the 24th. The mean temperature of the month was 41.9° , the shaded thermometer rising to 56° on the 5th, and falling to 31° on the 14th.

Mrs. Olive F. Symes recorded a rainfall of 1.08 inches on 10 days at Druid Lodge, Killiney, Co. Dublin. The maxi-

mum in 24 hours was .35 inch on the 24th. The average rainfall for February at Killiney in the 24 years 1885–1908, inclusive, was 1.752 inches on 14.2 days. The rainfall in January, 1913, was 5.95 inches on 22 rain-days. The heaviest fall in 24 hours being 1.35 inches on the 10th.

Dr. John H. Armstrong reports that at Coolagad, Greystones, Co. Wicklow, the rainfall was 2.11 inches on 12 days. The heaviest fall in 24 hours was .58 inch on the 24th.

At Auburn, Greystones, Co. Wicklow, Mrs. Sydney O'Sullivan measured 1.62 inches of rain on 11 days, the maximum in 24 hours being .46 inch on the 24th.

At the Royal National Hospital for Consumption for Ireland, Newcastle, Co. Wicklow, Dr. Charles D. Hanan, M.D., measured 1.62 inches of rain on 12 days, the largest daily measurement being .52 inch on the 24th. The mean temperature at the Hospital was 42.1° , the extremes being—highest, 56° on the 5th; lowest, 28° on the 20th. The mean maximum was 47.3° , the mean minimum, 36.9° .

The Rev. Arthur Wilson, M.A., returns the rainfall at the Rectory, Dunmanway, Co. Cork, at 4.90 inches on 13 days, the greatest fall in 24 hours being .83 inch on the 24th. The rainfall on the 6th was .71 inch, and that on the 28th was .63 inch. The rainfall in 1913 to February 28th inclusive amounted to 16.45 inches, or 5.89 inches over the average, which is 10.56 inches. The first 10 days, the 23rd, 24th and the night of the 28th were unsettled with heavy rains and high wind. The weather was very fine from the 11th to the 22nd and from the 25th to the 27th—all these days were rainless. Frost occurred each night from the 16th to the 21st and from the 25th to the 27th. A very cold east wind prevailed from the 14th to the 21st. It was mild and springlike from the 11th to the 13th and from the 25th to the 27th.

PERISCOPE.

THE COUGH OF TUBERCULOSIS WHICH CAUSES VOMITING.

AFTER prolonged and careful investigations on the question of la toux émétisante des tuberculeux, Dr. H. Paillard (*Le Progrès Médical*) has come to conclusions which are greatly different from the classical views. About ætiology, several factors have to be considered :—1. Overloading of the stomach—big meals bring on Morton's cough, therefore the patient must be directed to adopt fragmentary feeding. 2. Fatigue after meals : this cough is often met with among labourers, workmen, &c., but is not frequent among well to do people who can take a complete rest after meals. 3. The period of the disease : Morton's cough is much more common in the first stages of phthisis. 4. The localisation of the pulmonary lesions : it is very common in the common phthisis of the apices, but very rare when pleurisy has already prevented the movements of the left side of the diaphragm. 5. The "status dyspepticus" : this was considered by all the classical writers as an essential factor, but the author thinks it is a mere accessory because it is often absent, and, furthermore, cough is not at all constant in all dyspeptic patients. There are three varieties of Morton's cough. The most typical is the variety which follows on the onset of phthisis ; the cough of the later stages of the disease, less frequent, less regular, and more painful ; lastly, the variety which bears no relation to meals, but occurs in the morning, especially in patients with pharyngitis, and is not at all special to consumptive patients. The author insists on the feeling of breathlessness which appears after the meals and before the cough. The pathogeny of Morton's cough has been very much discussed, and the author discusses it again. He is in favour of the mechanical origin of this cough, and shows how Peter's theory is vague and inconclusive. According to H. Paillard the vomiting is due, as in whooping-cough, to the jolts and jerks of the cough, and in this respect he insists on the importance of the condition of the diaphragm in the causation of Morton's cough ; experi-

mentally he has noticed that the fixation of the left side of the diaphragm almost prevents vomiting ; clinically he has seen that Morton's cough seldom occurs in patients the left side of whose diaphragm has been fixed by a former pleurisy. Conversely, consumptive patients whose left diaphragm has normal or exaggerated movements when breathing or coughing are very often afflicted. In the former case, the movements are restricted and the stomach is comparatively well protected by the stiffness of the diaphragm and by the fact that the " thoracic aspiration " (Arnozan) is deficient ; in the second case—*i.e.*, exaggerated movements—the stomach is directly injured and the " thoracic aspiration " is at a maximum. As to treatment, H. Paillard recommends a few whiffs of oxygen after each meal ; these inhalations may be repeated if necessary ; they relieve the dyspnoea which is so common after meals and reduce the desire to increase the expansion of the thorax and diaphragm ; thus the stomach is given sufficient rest to evacuate its contents at a normal rate. This method, as well as attention to the hints given above about ætiology, has given excellent results.

HISTORICAL MEDICAL EXHIBITION, LONDON, 1913.

AMONG other historical medical objects of exceptional interest that have been secured for the Historical Medical Exhibition, organised by Mr. Henry S. Wellcome, and which will be opened in London during the meeting of the International Medical Congress in the coming summer, are many personal relics of Dr. Edward Jenner, the introducer of vaccination. These include the original lancets and scarifiers he employed during his first experiments, his case and account books, his snuff box, medicine chest and many other interesting articles. A large collection of autograph letters of Jenner's, some of unique interest, have also been loaned, together with the armchair from his study and in which he died. Other objects connected with the life of Jenner are also to be exhibited, including many valuable portraits of himself and family, painted at different periods, the illuminated addresses presented to him, together with the freedoms of the cities of London and Dublin, also medals and other documents of special interest. Concerning the history of anaesthesia, many interesting relics are to be exhibited, beginning with the original autograph journal and

manuscripts of Henry Hill Hickman, F.R.C.S., the discoverer of the application of the principle of anæsthesia by inhalation for surgical operations, which he proved by actual experiments on animals in 1823. Personal relics of Sir James Simpson, and some of the earliest forms of apparatus for administering chloroform and ether will constitute an exhibit of more than usual interest. Those who may possess any objects of a similar character connected with the history of Medicine and the allied sciences, and who would be willing to loan them, should communicate with the Secretary, 54A Wigmore Street, London, W., who will be pleased to forward a complete illustrated catalogue to anyone interested.

NEW PREPARATIONS AND SCIENTIFIC INVENTIONS.

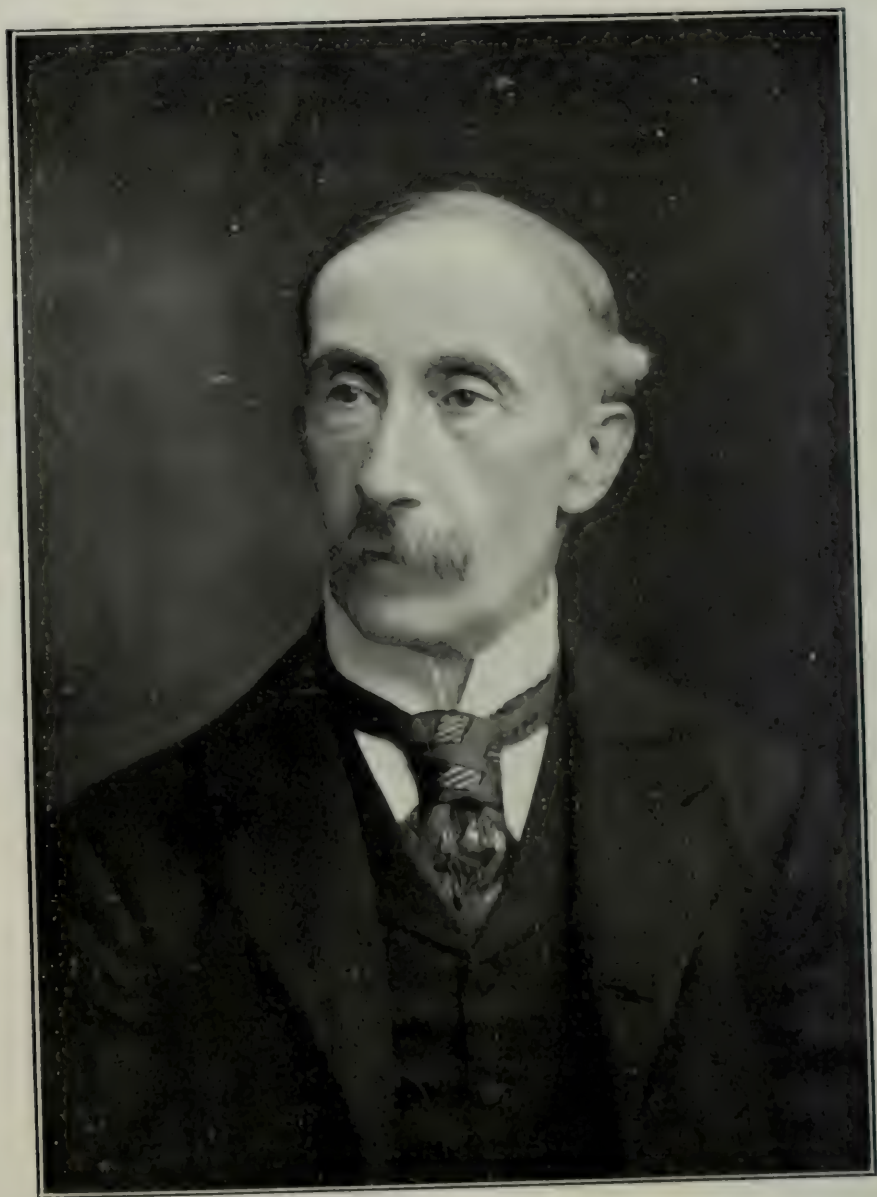
Omnopon.

IN 1909, Professor Sahli, of Munich (*Therapeut. Monatshefte*, ix., page 1), prepared a substance which he called "Pantopon," and which contained all the alkaloids of opium in a definite concentration and in soluble form. "Pantopon" is known in the united Kingdom as "Omnopon," both names indicating the presence of *all* the opium alkaloids. It is prepared by Messrs. Hoffmann-La-Roche, at their chemical works, 7 and 8 Idol Lane, London, E.C. In an important article on the "Opium Alkaloids" (*Bio-Chemical Journal*, Vol. VI., Part 4, 1912), Mr. F. W. Watkyn-Thomas, B.A., Cantab., furnishes some interesting details as to the relative action of this preparation. Among this investigator's results, we find it stated that, as compared with morphine, omnopon must be regarded as less toxic, and much less depressant to respiration, and further, that omnopon causes at every stage of its action much less effect in diminishing intestinal peristalsis than morphine. "Omnopon" is a light brown powder, perfectly soluble in water. It is five times the strength of opium, so that one grain represents 5 grains of opium, 75 minims of the B. P. tincture of opium, and $2\frac{1}{2}$ grains of the B. P. extract of opium. The dose is one-sixth to one-third of a grain, either by the mouth or as a hypodermic injection. The latter method is to be preferred whenever an immediate effect is desired. It is dispensed in tablets of one-sixth of a grain, hypodermic tablets

of one-third of a grain (0.02 gramme) ; or in ampoules, each of which contains 1.1 cubic centimetre of a sterile 2 per cent. solution. Of this solution, 1 cubic centimetre represents one-third of a grain of omnopon. The hypodermic tablets are quickly and perfectly soluble in water, of which some 15 minims may be used.

Omnopon-Scopolamine (Scop-Omnopon).

BIERMER (*Zeitschrift für ärztliche Fortbildungen*, 1912, p. 528), after administering omnopon in 17 obstetric cases, recommended as the best dosage 0.02 gramme (gr. $\frac{1}{3}$) of omnopon in conjunction with 0.0002 (gr. $\frac{1}{3000}$) of scopolamine. A year previously Aulhorn expressed his preference for giving omnopon in combination with scopolamine in obstetric practice. At the beginning of labour, when the pains were strong, he injected 0.01 grm. ($\frac{1}{8}$ grain) "omnopon" with 0.0003 grm. ($\frac{1}{250}$ grain) "scopolamine." Half an hour to an hour afterwards, according to the severity of the action, he injected 0.01 grm. ($\frac{1}{8}$ grain) "omnopon" with 0.00015 grm. ($\frac{1}{5000}$ grain) "scopolamine." Ten to fifteen minutes after the first injection most of the patients experienced a certain feeling of drowsiness, whilst even excitable women became much quieter. After the second injection the patients remained in a somnolent condition during the period between the pains, but awoke at once when summoned to do so. In speaking of the complications resulting from the use of "omnopon-scopolamine," Aulhorn writes that he saw no injurious after-effects in either mother or child. Scop-omnopon ampoules of 1.1 cc. contain two-thirds of a grain (0.04 gramme) of omnopon, and one-hundred-and-fiftieth of a grain (0.0004 gramme) of scopolamine. The manufacturers are the Hoffman-La-Roche firm, Idol Lane, London, E.C. The mode of administration recommended is as follows:—For producing a state of semi-narcosis, half an ampoule (8 minims) or (0.5 cc.) is usually sufficient. In vigorous patients, however, a second injection of the same quantity is sometimes necessary. Complete narcosis may also be obtained with the aid of "scop-omnopon." It is quite possible to operate on patients without any inhalation anæsthetic, but in most cases a small quantity of ether (not chloroform) is necessary.



SIR HENRY ROSBOROUGH SWANZY, M.A., M.D.,
Doctor of Science;
Fellow and Past President, Royal College of Surgeons in Ireland

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PART I. ORIGINAL COMMUNICATIONS.

ART. XIII.—*A Case of Tabes Dorsalis (?) with Spinal Lesion.*^a By FRANCIS C. PURSER, M.D.; Assistant Physician, Richmond, Whitworth and Hardwicke Hospitals, Dublin. (Illustrated.)

THIS case seems worthy of record as the clinical signs are fairly definite and are such as to make a precise diagnosis a matter of speculation.

CASE.—F. G., male, aged forty, single, harness-maker. Patient was admitted to hospital on November 7th, 1912, under the care of Dr. O'Carroll, who has kindly allowed me to report the case. His complaint was of weakness and difficulty in walking.

Two years ago, when taking a walk, the patient felt a sudden stiffness and shooting pain in his right thigh; he fell to the ground, but was able afterwards to walk home with the aid of a passer-by. He went to hospital on the following day, and left after a month very much improved. Some six months later he noticed a weakness in his left thigh. He again went to hospital, but he did not improve much.

^a Shown at the Section of Medicine in the Royal Academy of Medicine in Ireland on Friday, February 28, 1913.

He became slowly more helpless on his feet, till now he can walk very little, and that only with the aid of two sticks.

For about two years also the patient has suffered from pains in his legs and thighs. Sometimes they are of short duration, sometimes they last days. They are often of great severity. At present the pain is rarely very severe, and is confined to the great toe and the "heart" of the left foot.

Family History.—Father: dead, thirty-six; "heavy cold." Mother: seventy, healthy. One sister living; dead, three; convulsions. Four brothers, healthy.

Previous History.—Measles in childhood. Gonorrhœa twenty years ago. Syphilis denied. "Lumbago," of no great severity but of some months' duration, about five or six years ago. Inguinal hernia first noticed three years ago.

The patient is thin and pale, but not unhealthy-looking. Upper incisor teeth missing. Viscera seem normal, excepting a very large right inguinal hernia, for which he wears a suitable truss. Intelligence and attention good. Memory is only fair; he varies in the minuter details he gives of his illness.

The cranial nerves are all normal, including those subserving special senses. Notably there is no pupillary abnormality, nor alteration in the fundus oculi.

The upper extremities present no abnormality in tone, in power, range, or precision of movement, or in sensation.

As the patient sits at ease on the side of his bed the spine is seen to be slightly curved. It is convex to the left in the lumbar region, with a compensatory curve in the lower dorsal region. Below the third lumbar the vertebral spines are uncountable. The lower ribs on the right side are in the pelvis, those on the left are two or three inches higher. Moreover, there is a rotation of the spine on a vertical axis, as can be seen by the level of his ribs, viewed from behind, when he stoops. The erector spinæ on the left is more prominent than on the right. Both are strong. The back seems supple, but is less freely bendable laterally to the left than to the right. Abdominal muscles equally strong right and left. It is convenient here to describe the radiograph of the spine, which was made by Dr. E. J. Watson.

The body of the fourth lumbar vertebra seems small compared to those of the third and fifth vertebræ. The inter-

PLATE XVII.

DR. F. C. PURSER on "A Case of Tabes Dorsalis (?)."



Radiograph by Dr. E. J. Watson, showing deformity in lumbar spine.

vertebral discs above and below it have disappeared or are greatly reduced in thickness. The vertebra appears rotated on two axes—round a vertical axis it is rotated so that the spine is displaced to the right, and it is also rotated, or perhaps its body is altered in shape, so that the lower articular process on the right is on a level with the upper articular process on the left. There is no obvious alteration in the density of any of the vertebræ.

The spine is painless; neither heavy pressure nor the extremity of movements causes any discomfort. The only pain referable to the lesion has been the “lumbago” he suffered from five years ago. There is no history of injury at any period recent or remote.

The most obvious physical signs are found in the lower extremities. The muscles of the hips and thighs are wasted, and the movements corresponding to the affected muscles are diminished in strength. The muscles involved are the ilio-psoas, the gluteus medius, the adductors, sartorius, and the quadriceps femoris. The gluteus maximus and the tensor fasciæ femoris seem normal. The muscles mentioned are about equally affected on each side except in the case of the quadriceps femoris, which on the right side is wasted to a stringy mass, and seems absolutely paralysed. It reacted to no electrical stimulus. The flexors of the legs and the muscles moving the feet and toes are not powerful, but are not very obviously weaker than normal except the left peroneal group, which is distinctly weaker than the right group.

The patient stands with difficulty, swaying irregularly. He cannot stand at all with his eyes shut. He walks with his toes turned well out. He can turn them in hardly at all. He keeps his body bent well forward, and uses his sticks like a pair of fore-legs. Such movements as he can make in bed are not ataxic.

The sensory disturbances are outlined on the figures. Those showing horizontal lines represent the areas in which appreciation of touch (cotton-wool) is defective. In these areas only one in four or five stimuli are appreciated, and in the zone around the nipples sensation is still more defective. The other figures show the areas where appreciation of pin-pricks is defective. The pin point is recognised as such, but many pricks of sufficient severity to cause bleeding are

"blunt" in comparison with gentle applications on the normal abdomen. The defect in the nipple zone is but a slight hypalgesia.

Hot and cold are correctly appreciated. Once or twice there were recurring sensations of cold.

Muscle-pain sense is absolutely lost in both lower limbs. Senses of position and of positive movement are not lost, but are not as acute as normal.

Compass-test.—Threshold 4.5 c.m. on each sole.

The upper abdominal reflexes are very feeble or absent; the lower are normal. When a plantar reflex can be obtained it is flexor. The knee-jerks and ankle-jerks are absent.

The sphincters are not, and never have been, affected.

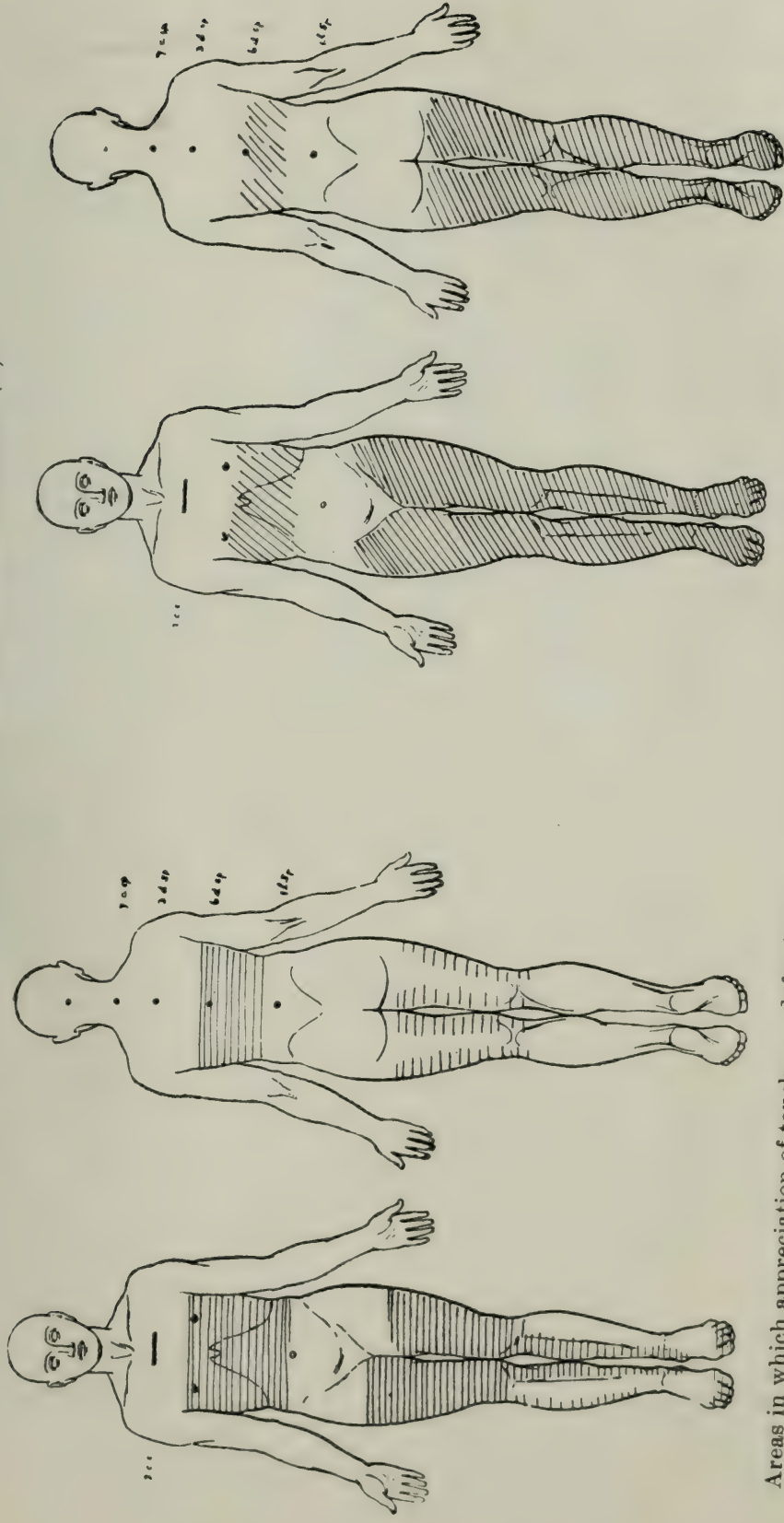
Wassermann's test in the blood was negative. Five fruitless attempts were made to obtain cerebro-spinal fluid, and further attempt is not allowed. Von Pirquet's skin reaction was negative.

The interesting question of diagnosis may, I think, best be attempted by seeing how far the spinal lesion, as we see it in the radiograph, can be held responsible for the various physical signs. It will readily enough explain all the motor phenomena except the weakness in the left peroneal group, for the affected muscles are supplied wholly or in part by the third and fourth lumbar roots, which emerge above and below the fourth lumbar vertebra. Pressure on these roots may fairly enough be held to be the cause of the motor phenomena, but it will not explain the sensory phenomena. Though the areas of anæsthesia on the lower limbs correspond fairly to the third and fourth roots, the areas of hypalgesia extend far beyond them, and the affection of the trunk is quite a thing apart. It is, moreover, hard to imagine a mechanical lesion causing absolute loss of muscle-pain sense and permitting the passage of quite "epicritic" thermal stimuli.

My views on the diagnosis are fairly expressed in the title under which I present this case. The sensory symptoms and signs and the state of the reflexes suggest tabes very strongly. The presence of paresis in the peronei on

PLATE XVIII.

DR. F. C. PURSER on "A Case of Tabes Dorsalis (?)."



Areas in which appreciation of touch was defective.

Areas in which appreciation of pin-prick was defective.

one side is not against such a view, not nearly so much as the absence of pupillary and sphincter involvement. And the spinal lesion itself, which is not the result of injury, and is not, as far as can be seen, tuberculous, may be discussed as a lesion in the vertebral articulation comparable to the affection more commonly seen in the knees and other articulations, and known as Charcot's joint.

ART. XIV.—*Iodoform and Benzoyl Chloride in Pulmonary Tuberculosis: a Criticism.*^a By JAMES B. COLEMAN, C.M.G., M.D., F.R.C.P.I.; Visiting Physician to the Richmond Hospital, Dublin; late Visiting Physician to the Royal National Hospital for Consumption for Ireland.

THE treatment of pulmonary tuberculosis by iodoform and benzoyl chloride has *à priori* so little to recommend it that it may appear scarcely worthy of discussing, but the subject is of some interest, inasmuch as their inability to approve this method of treatment was, indirectly, the cause of the recent resignation of the entire Consulting and Visiting Medical Staff of the Royal National Hospital for Consumption for Ireland.

In the year 1911 the advocate of this treatment, having abandoned Dewar's intravenous injections of iodoform "owing to widespread objection to intravenous injections," began to practise intramuscular injection of iodoform and benzoyl chloride dissolved in ether and liquid paraffin. The use of benzoyl chloride "as an ideal treatment in pulmonary tuberculosis" was suggested by Deykes' favourable account of the treatment of leprosy by nastin (prepared by the action of benzoyl chloride on organisms found in leprosy); but, seeing that more recent investigations^b carried on at the Mahaica Leper Asylum

^a Read before the Section of Medicine in the Royal Academy of Medicine in Ireland, on Friday, April 4, 1913. [For the discussion on this paper see page 378.]

^b Further Report on the Nastin and Benzoyl-Chloride Treatment of Leprosy. By Dr. E. P. Minett, Asst. Govt. Bacteriologist, British Guiana.

in British Guiana established the fact that cases of leprosy treated with nastin and benzoyl chloride gave no better results than were obtained in untreated cases, it would appear that benzoyl chloride was adopted for use in pulmonary tuberculosis on an erroneous assumption. In May, 1911, it was suggested that a trial should be given to the iodoform-benzoyl-chloride treatment in the Royal National Hospital for Consumption for Ireland, but the Medical Staff expressed their disapproval of it. However, at that time the treatment was being carried out in Steevens' Hospital, Dublin, on patients suffering from pulmonary tuberculosis. Four out of seven patients so treated died in the hospital, and the treatment was discontinued.

The advocate of the iodoform-benzoyl-chloride treatment read a paper before the Royal Academy of Medicine in Ireland on the 6th of December, 1912, entitled "Some Specific Methods of treating Tuberculosis of the Lungs." ^a In this paper he reverts to the method (introduced by Dewar in 1903 ^b) of intravenous injections of half-grain doses of iodoform dissolved in ether every second day, increasing to five times a week (followed by a course of tuberculin, and vaccines, if required). The author of the paper of the 6th of December, 1912, contented himself with accepting Dewar's conclusions as to the action of iodoform, and he made no attempt to justify the administration of the drug on scientific grounds. His narration of six cases of pulmonary tuberculosis in which successful results were claimed for the treatment is of no scientific value, as it was not a complete enumeration of *all* the cases in which the treatment was tried by him.

Amongst the obvious objections to the treatment of pulmonary tuberculosis by intravenous injections of iodoform may be mentioned the following :—

Iodoform is a weak germicide, not fatal to bacteria. Experiment has shown that if dusted over sterilised

^a Med. Press, 1st Jan., 1913.

^b Brit. Med. Jour., 21st Nov., 1903.

nutrient media growth will take place from the organisms contained in the iodoform itself. It is not *monotropic* for the tubercle bacillus, for the term "monotropic," as used in connection with the specific chemotherapy of Ehrlich, implies that the drug must have a special affinity for, and enter into destructive chemical combination with, the protoplasm of the particular offending microbe, and be inert with respect to all the chemical constituents of the normal body. But iodoform is toxic, causing, in the more chronic cases, such symptoms as malaise, loss of strength, wasting, loss of appetite, vomiting, sense of depression, fever, rapid pulse, insomnia, headache, impaired memory, drowsiness, progressive weakness, complete state of hebetude, loss of power in the legs, loss of control over the sphincters, and even death by coma.

In the more acute cases, malaise, vertigo, intense headache, insomnia, delirium, very high temperature, very rapid pulse, albuminuria, anorexia, vomiting, prostration, coma, and death (Sir F. Treves, *Practitioner*, 1886).

According to the latest edition of Graefe-Saemisch, iodoform is harmful to the eye. In many instances, retro-bulbar neuritis with central scotoma has followed its introduction into the system (Critchett, Terson, Priestley-Smith, &c.) After prolonged use, atrophy of the optic nerve has followed. According to Terson it causes retinal hæmorrhage. The author of the communication of the 6th of December, 1912—already referred to—noted slight amblyopia in one of his patients, and in another (unpublished) case of his—a fatal one—retinal hæmorrhage occurred. Iodoform, therefore, is not free from the suspicion of being *optico-neuro-tropic*.

But in pulmonary tuberculosis the *intravenous* injection of iodoform dissolved in ether has special dangers, as the injection is liable to be followed by severe attacks of coughing, and thereby submits the patient to the risk of hæmoptysis or of pneumothorax. Those dangers may not be of frequent occurrence, but the risk is ever present,

and in the absence of any proved counter-advantage due to the administration of iodoform it is sufficient to put a bar to its use.

Sir Almroth Wright, in a most valuable report, dated October, 1912, on the "Pharmaco-therapy of Pneumococcus Infections," considers the conditions which ought to be satisfied before we apply any drug treatment with a view to killing the causal agents of disease in the infected body. He discusses the relation in which the *specific pharmaco-therapy* of Ehrlich stands to the prescribing of antiseptics, and he points out that it never entered into the conception of the physician who prescribed antiseptics to require of those that they should be *monotropic* for the causal agents of disease, nor did he appreciate that the effective dose of a therapeutic agent is capable of being determined by blood-tests. He goes on to ask—"Is it a defensible proceeding to administer a drug concerning which we have neither *à priori* grounds for believing that it will, nor evidence to show that it does, do what is intended? Such practice is, from the standpoint of strict science, clearly indefensible, and we, as a profession, regard it as indefensible. For we reprobate in quackery not only the fact that it has a low standard of financial rectitude, and that it proclaims its merits in public places, but also the fact that it proceeds upon assumptions which are either demonstrably false or unscientifically unjustified. And we condemn not only treatment which is based upon notoriously erroneous assumptions, but also treatment which is simple random experimentation."

In an inquiry into the treatment of pneumonia by æthylhydrocupreinhydrochlorate (a drug brought forward by Morgenroth for trial in pneumonia) Sir Almroth Wright carried out the following series of investigations:—

- (1) Measurement of the bactericidal effect exerted upon the pneumococcus by graduated dilutions of the drug in water and serum respectively.

- (2) Prophylactic and therapeutic experiments on

animals, supplemented by the bactericidal effect exerted upon the pneumococcus by the blood of these animals drawn off before and after the administration of the drug.

(3) Preliminary experiments on normal and infected men, supplemented by the measurements of the bactericidal effect exerted upon the pneumococcus by the blood of these men drawn off before and after administration of the drug.

(4) Comparison of the course which pneumonia runs in treated and untreated cases.

Mutatis mutandis, the rules laid down by Sir Almroth Wright in investigating the effect of æthylhydrocupreinhydrochlorate in pneumonia apply to an inquiry on similar lines in reference to the use of iodoform in pulmonary tuberculosis.

ART. XV.—*Return Cases of Scarlatina.*^a By JOHN MARSHALL DAY, M.D. Univ. Dubl.; Medical Superintendent of the House of Recovery and Fever Hospital, Cork Street, Dublin.

FOR many years a controversy has been carried on as regards this disease, some considering that if a case occur in a household within six weeks after a case of scarlatina has been discharged from hospital it is a return case, and is due to some problematical neglect on the part of the hospital authorities, and in some cases the parents have received damages in law against the doctor.

The following cases illustrate this point :—

C. M., aged five and a half years, was admitted on the 26th of October, 1912, suffering from scarlatina. On the 1st of November she developed rheumatic fever with cardiac complications and otorrhœa later on. She improved considerably, and on December 26th she was removed out of the scarlatina into the non-infectious ward. Five days later her father, contrary to our advice, took her home;

^a Read before the Section of State Medicine in the Royal Academy of Medicine in Ireland on Friday, April 11, 1913.

her otorrhœa had then ceased. He was advised to keep the other children away from her, and to call in his own doctor to attend her, owing to the condition of her heart. He told me that she occupied a room to herself, but that often the other children ran in and out of it. On the 10th of January, being then four days ill, her brother, aged two and a half years was admitted with scarlatina. Now, the question is, Was he a return case? it being two months since the commencement of the first child's illness, and she having been isolated for five days before leaving hospital.

The second case was that of a boy who had been seven weeks in hospital, of which three weeks had been spent in the convalescent department of the hospital, after scarlatina, and who afterwards was transferred to the non-infectious department of the hospital, where he was detained for five days. He was discharged, being, in our opinion, quite free from infection, having no discharge from his ears. His sister was admitted on the 26th of December, and he was also sent back, having slight otorrhœa, which ceased in a few days. But was the otorrhœa the cause of the infection of his sister?

A converse case is as follows:—Last year I wrote to a lady to take home her child, convalescent after scarlatina, on a Wednesday. On the Tuesday she brought in a child with scarlatina.

I discharged a child who had had scarlatina. A week afterwards another came in, and I thought it was a return case until I was told the first child had gone straight away to Kingstown, and had never been in contact with the other child.

What are return cases? I think you must lay down some limit, for one can scarcely be held responsible for cases which occur after a week or ten days unless one can exclude all other sources of infection (a thing difficult to do in a city during epidemic times). I believe that if you admit that the poison may lurk in clothes, that often a child contracts scarlatina on a Sunday, is sent to hospital

later in the week, and the week-day clothes are disinfected, not the Sunday clothes. They are put on the child when he or she leaves hospital, and they are the source of infection. This question is of the more importance from the view of discharging from hospital, because one has to certify children as being safe to return to school and persons to their business, and, therefore, to determine when a patient is free from infection is very important to most medical men.

I remember a case where a boy was leaving hospital; his boots had got too small for him, and the nurse (wrongly) gave him his brother's boots to wear going home, he also being a patient at the time. Another member of the family wore the boots afterwards and contracted scarlatina.

Dr. Cosgrave relates a case in which the parents, who kept the child at home, and being most anxious to prevent infection, disinfected the patient carefully. He chanced to call just at the critical moment, and saw the little child, after her bath, run across to a non-infectious room to be dressed, but she was carrying a favourite doll with her which the doctor pointed out was full of infection. The people had never thought of this!

One has to consider very carefully in what way a child who has recovered from scarlatina may be infectious, and what precautions should be taken before discharge from hospital. At one time we all equipped discharge departments in which a child entered a room, was stripped there, entered a bath-room, was thoroughly bathed with some antiseptic in the water, and then handed over to another nurse (non-infectious), who dressed the child and handed her over to her parents. This procedure was objectionable, because, in the cold weather, the child was liable to cold by being brought out into the open air after a hot bath, often with her hair not quite dry; also, it necessitated two nurses being present to bathe and dress each patient, and, lastly, the child often developed a slight nasal discharge which might become the nidus of fresh infection.

The next improvement was to subject the hair, nose, ears, and throat to vigorous disinfection for a week before discharge.

I hold the view that the chief source of infection in scarlatina lies in the throat and nose, and, to a certain extent, in the otorrhœa which so frequently follows severe cases; also—and on this point I may say I lay great stress—in the breath for about a week after discharge from the infectious wards.

When one considers that the nurses and attendants on scarlatina and diphtheria patients may often be the conveyors of infection in their breath, although being themselves quite well, one must lay great stress on this as a source of infection. I was at one time looking after some children suffering from scarlatina belonging to a medical friend of mine; several of the family had escaped infection, and were away in the country. One day I missed the governess who had been helping to nurse the sick ones, and was informed that she had been sent down to take charge of the other children. I said I was afraid she would carry infection, but the mother informed me that she had had a bath, washed her hair, and changed everything. I said her breath is infectious. The other children contracted the disease in a few days.

Following these lines, our present procedure is to pay no attention to the peeling, but to rely altogether on the condition of the nose, throat, and ears. As long as there is any redness of the throat or nasal discharge a child is not safe to be discharged. If the tonsils be enlarged we have them removed, unless the parents object; in which case we decline to take the responsibility of guaranteeing freedom from infection.

When we think the child is ready we write to the parents to know if they can isolate the child for a week from the other children, and if they cannot do so we arrange to put the child in a separate non-infectious ward for that period. I may relate a story here which illustrates my position. I was treating several children from an insti-

tution near Dublin, and the authorities arranged, as the children went back, to keep them apart from the others for a week. The last child went back, and lo and behold ! another child came in a few days later ; in fact, the sister of the last case. The authorities blamed me very much, but on inquiry I found that as the child who was just discharged was going through the playground of the school the sister ran over to her and kissed her ; she alone got scarlatina.

As regards otorrhœa, which may become chronic, their stay in hospital is at least two months, during which time careful antiseptic treatment is carried out, and in the few cases that do not cease after that time we detain them longer if the parents will permit, at the same time removing them out of the infectious wards.

“ V. E. M.,” 1913.

THE thirteenth “ Voyage d’Études Médicales ” to the Mineral Waters and Climatic Health-resorts of France will take place from August 25th to September 6th, 1913, under the competent Presidency of Professor Landouzy. The tour will include the stations of the south-west of France, to be visited in the following order :—Arcachon, Dax, Biarritz, Hendaye, Cambo, Salies-de-Béarn, Pau, Saint-Christau, Eaux-Bonnes, Eaux-Chaudes, Argelès, Barèges, Saint-Sauveur, Gavarnie, Caunterets, Bagnères-de-Bigorre, Capvern, Barbazan, Siradan, Bagnères-de-Luchon. Several travelling-scholarships (Bourses de Voyage) have been already offered to the “ Voyage d’Études Médicales ” of 1913, by M. le Professeur Henrot, the Societies of the Mineral Waters of Evian-Cachat, Pougues, Vichy, Vittel-Grande Source. All inquiries as to the arrangements should be addressed to Dr. Carron de la Carrière, 2 Rue Lincoln, or to Dr. Jouaust, 4 Rue Frédéric-Bastial, Paris.

PART II.

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

Human Embryology and Morphology. By ARTHUR KEITH, M. D., LL.D. (Aberdeen), F.R.C.S. (England). Third Edition, revised and enlarged. 442 Illustrations. London: Edward Arnold. 1913. Demy 8vo. Pp. viii + 475.

A NEW book by Professor Keith is an event in the world of anatomy, and the book now before us, though bearing an old and well known name and called a third edition, is in fact a new book and a great improvement upon its immediate predecessor. Professor Keith's writings are always refreshing and stimulating, though sometimes they stimulate to violent opposition. This book will not do that. It is essentially a student's manual and is, properly, in large part a record of the results obtained not only by its author, but by all anatomists and accepted by general anatomical opinion. This must not be taken as meaning that the book is a mere compilation, for the personality of its author shines from every page.

Though no trained embryologist will agree with every statement the book contains, students will find in it an interest-provoking guide towards an understanding of the structure of the human body and, it may safely be added, they will find no other book in English that is not far longer, its equal in usefulness.

But the book is something more than a students' handbook. Its many references to original sources give it the character of a general review and mirror of all recent research in human embryology and morphology. It reflects faithfully the extraordinary outburst of research activity which, during the past decade, has been such a striking feature of the broadening life of the medical

schools of Canada and the United States. In no department of medical knowledge has this activity been greater than in anatomy and its related sciences. As we glance over the pages of the book, reference after reference to Mall, Bardeen, M'Clure, MacCallum, Lewis, Sabin, Dwight and Dandy, gives us some vague appreciation of the collective value of the brilliant papers which have poured month by month from the laboratories of the Johns Hopkins, Harvard, Wisconsin, Cornell, Columbia, Pennsylvania and Michigan Universities, to name but a few of the American seats of embryological research. The principal Canadian names are those of M'Murich and Evatt. They serve to recall the researches conducted in the laboratories of the Universities of Toronto and Manitoba.

As we turn over the pages another phenomenon strikes us. Where are the German names that used to be so plentifully besprinkled through all books on embryology?

They are not there, at least in anything like their former numbers. The truth is that Germany's supremacy in anatomical research is passing. America is beating her. Ten years more at the present rate and America, to adopt her own expressive diction, will have beaten Germany "to a frazzle." We have some doubt as to the exact meaning of this picturesque phrase, but it sounds bad for the beaten.

When we turn to see where Ireland stands in embryological research we find matter for both legitimate satisfaction and stimulus. There are six medical schools in Ireland, and apparently only three are actively interested in these things. Trinity, Queen's University and the College of Surgeons have, from their anatomical laboratories, contributed new facts and new ideas to the common stock of embryological knowledge. That more has not been done is to be regretted, because with Dublin, the centre of one of the greatest schools of midwifery in the Empire, it would seem that many opportunities for embryological research must be wasted or the results would be greater.

We have wandered far from the book, led off by the interest of its contents. What remains to be said? The print is good; the figures clear; the general make up attractive, and the known facts of development accurately recorded, except—we think—in regard to the thyroid gland, where there appears to be some inaccuracy. To all the theories and hypotheses that the facts are called upon to support, it is impossible to subscribe. They are always interesting and ingenious, but they cannot all be true because sometimes they contradict one another. In a rapidly developing science this is almost inevitable, but fortunately it does not seriously detract from the merit of the book even from the student's point of view.

RECENT WORKS ON OPHTHALMOLOGY.

1. *Ophthalmic Nursing*. By SYDNEY STEPHENSON, M.B., C.M., F.R.C.S. (Edin.), D.O. (Oxon.); Editor of the "Ophthalmoscope;" Ophthalmic Surgeon to the Queen's Hospital for Children, and to the Evelina Hospital, London, &c. Third Edition, revised and enlarged. With Eighty Illustrations. 1912. Pp. viii + 229.
 2. *Sclero-corneal Trephining in the Operative Treatment of Glaucoma*. By ROBERT HENRY ELLIOT, M.D., B.S. Lond., Sc.D. Edin., F.R.C.S. Eng., &c.; Lieut.-Colonel, I.M.S.; Superintendent of the Government Ophthalmic Hospital, Madras; Professor of Ophthalmology in the Medical College, Madras; and Fellow of the University of Madras, S. India. Thirty-three Illustrations. London: George Pulman & Sons. 1913. Demy 8vo. Pp. xviii + 117.
1. THE difficulty of writing a guide for ophthalmic nurses—or any other nurses—has been very well surmounted by Mr. Sydney Stephenson. We mean that it is extremely easy to fill such a handbook with facts which are really only a source of confusion to the would-be nurse and of danger to her patient, because the nurse may imagine her

own knowledge to be greater than it really is. Mr. Stephenson has avoided this. In his first chapter he gives a short account of the structure and action of the human eye followed by one upon the germ theory of disease, and then one upon contagion and infection. These three chapters might be read with advantage by all nurses. The remaining chapters are devoted to the various remedies, bandages, arrangements for operations, &c., which are peculiar to ophthalmic work. A useful glossary and illustrations of instruments are appended.

We can heartily recommend this book to all ophthalmic nurses.

2. WE may say at the outset that this is a book which every ophthalmic surgeon—young or old—should possess. There has been always, amongst ophthalmic surgeons, the feeling that iridectomy (without any doubt—we personally think—the best operation for *acute* glaucoma) has been in many instances quite ineffectual in the treatment of *chronic* glaucoma. Consequently of late years there has arisen the feeling that some operation which would leave a permanent drain of the eye fluids into the sub-chorioid space or beneath the conjunctiva, should be devised. As Colonel Elliot puts it: “The underlying principle is to be expressed in the one word ‘sclerectomy.’” Many methods have been devised to arrive at this end, and Elliot’s operation is one. The best one, we think. Most of these operations are described in the book before us and are commented upon by the author very impartially. Three chapters—one on “The Trephine in the Treatment of Glaucoma,” by Sydney Stephenson; one on “The Newer Operations for Glaucoma,” by Arthur T. Ballantyne; and one “On the Site of Trephining for Glaucoma: its importance,” by E. Temple Smith—are included.

The remaining chapters give a very full account of Colonel Elliot’s methods of preparing his patient and his instruments; of his way of performing the actual operation and of treating the complications which may arise

at the time or afterwards. The statistics of cures are more convincing to a European mind than most of those which we receive from India, and a higher standard of "cure" appears to be adopted.

The perusal of the book will convince, we think, even those wedded to some other form of sclerectomy, that Elliot's operation is worthy of a trial, and if it be tried we have no doubt that it will be practised.

The Ship Captain's Medical Guide. Edited by CHARLES BURLAND, M.D., F.R.G.S., Senior Medical Inspector of the Board of Trade. London: Published by His Majesty's Stationery Office. 1912. 8vo. Pp. viii + 214.

To one accustomed to live in the centres of civilisation with all its attendant comforts and conveniences it is astonishing how gaps in the ordered round of daily necessities are apt to occur when one is removed from its direct influence. In no instance is this more the case, perhaps, than at sea or in the bush, when one may be for weeks far from the haunts of man. Accidents, we know, will occur in the best regulated families, and the need of a medical man—so simple a matter in the case of the city dweller—often finds one unprepared, a knowledge of the healing art not being common in such an age of specialisation as the present. In so perilous a calling as that of the sea it is hardly necessary to point out how frequently the services of a doctor are likely to be required, yet, except in the case of passenger steamers, it would be impossible for every vessel to carry one. Some knowledge of what to do in an emergency is therefore necessary for every captain of a ship. In the latest edition of this well-known and useful little book, which has been revised and re-written by Dr. Burland, and has now for the first time been issued as an official publication by the Board of Trade, he will find, in clear and concise language, a very *multum in parvo* of medicine and surgery, by reading which carefully and following the instructions contained therein it is safe to say that he will not go very far wrong. Throughout the

treatment recommended is that safest for amateur application. Briefly stated, the chief outlines of the book come under the headings of "Prevention of Disease," "Accidents," "Poisons," "Medical Diseases," and "Surgical Diseases." Also included are "Scales of Medicines and Medical Stores" issued by the Board of Trade, "Doses and Directions for Use of Medicines," a useful list of recipes, and certain sections of the Merchant Shipping Act. The book is excellently illustrated, is furnished with an index and table of contents, and should be found indispensable by every master of a sea-going vessel.

Symptoms and their Interpretation. By JAMES MACKENZIE, M.D., LL.D. Aber. and Edin.; Lecturer on Cardiac Research, London Hospital; Physician to the Mount Vernon Hospital; Consulting Physician to the Victoria Hospital, Burnley. Second Edition. London: Shaw & Sons. 1912. Demy 8vo. Pp. xx + 304.

THE first edition of this novel and thoughtful work was exhausted in three years. It received the further distinction of being translated into other languages—an appreciation which its merit fully justified.

In reviewing the first edition in the number of this Journal for September, 1909 (Vol. CXXVIII., Third Series, No. 453, page 190), we drew attention to the salient features of the work, more especially to the author's views on the phenomena of visceral pain. In his preface to the second edition Dr. Mackenzie states that several writers have criticised his views on this subject, but he considers that some of his critics have failed to grasp his meaning and have not sought in individual instances for the phenomena which are necessary for the solution of the problem. By the careful and continuous observation of cases with visceral pain, unquestionable evidence as to mechanism will, in the author's opinion, be forthcoming. In Chapter IV. Dr. Mackenzie discusses the mechanism by which pain is produced in visceral disease, and in

Chapter IX. he promulgates the laws determining the nature of reflex symptoms.

Perhaps the most convincing illustration of his doctrine is to be found in Chapter XX., in which he advances clinical proofs that the pain of angina pectoris is a viscerosensory reflex. He suggests that such other symptoms of this terrible condition as an abundant flow of saliva and the secretion of large quantities of pale urine are due to reflex stimulation of nuclei in the floor of the fourth ventricle.

Enough has been stated to prove what an interesting book the author has written. Its pages are rich in clinical material.

Some Tendencies of Modern Medicine from a Lay Point of View. By RIGHT HON. SIR HORACE PLUNKETT, K.C.V.O., F.R.S. Dublin and Belfast : Eason & Son, Ltd. 1913. Pp. 31.

ON March 12, 1913, Sir Horace Plunkett, one of the most gifted and philanthropic of living Irishmen, delivered one of this year's series of "Afternoon Lectures" in the Theatre of the Royal Dublin Society, under the title "Some American Thoughts upon Health." The pamphlet before us is a full and carefully revised transcript of that lecture without the pictures by which it was illustrated, but with certain additions.

The lecture is based mainly on the author's personal experiences gained during a visit to the Battle Creek Sanatorium in the State of Michigan, about 160 miles on this side of Chicago. In a footnote Sir Horace explains that the spelling "Sanatorium was preferred to Sanatorium because the practice in several of these institutions was as indifferent as the Latin in their nomenclature." It really does not matter, as neither form existed in classical Latin—the adjective "sanatorius" (that is, giving health) appearing only in late Latin.

In his address Sir Horace, having sketched the origin and history of the Battle Creek Sanatorium, proceeds to

give a full, interesting and instructive account of the treatment pursued at that health-resort. In two aspects—the education of the patient and the insistence upon a rational dietary the author claims a fundamental superiority for the institution over any medical practice he happens to know. While we must not be taken as agreeing with all the details of the Battle Creek methods, we must admit that those which relate more especially to exercise and diet appear to be founded on common sense.

As a practical application of his experiences at Battle Creek, Sir Horace urges that the public and the medical profession in our own country should agree that the function of the physician as an adviser in the maintenance of health and prevention of disease should be recognised far more than it is at present. With this view we are in thorough accord, having always assigned a first place to Preventive Medicine since the days of Rumsey of Cheltenham, Simon of London, Acland of Oxford, and Stokes of Dublin—those great men of a past generation, far-seeing pioneers of State Medicine.

We also agree with the author of this instructive lecture that steps might well be taken in the United Kingdom to place at the disposal of the private practitioner the wonderful aids to diagnosis furnished by the comprehensive physical examination carried out in the Battle Creek Sanatorium. Had such an institution existed in the United Kingdom, the public and the medical profession would have heard less of a capitation fee of ninepence sterling for a physical examination and a medical certificate under the National Insurance Act of 1911.

Notes on the Treatment of Tuberculosis (Preventive and Curative). By JOHN LAIRD, Licentiate of the Royal Colleges of Surgeons and Physicians, Ireland. Bristol: John Wright & Sons, Ltd. 1912. Pp. 85.

It has been stated that the “cure” of tuberculosis is to a great extent a matter of nutrition. Dr. Laird’s method of treatment is based on this doctrine, to which no one

need take exception. He endeavours to promote digestion and absorption by the administration of a mixture containing iodide of sodium, benzoate of sodium, Fowler's solution, tincture of pulsatilla, tincture of baptisia, syrup of orange and chloroform water—a fair example of polypharmacy!

He claims that this combination of remedies has remarkable power in getting the whole digestive system into a healthy condition.

Combined with the administration of these drugs he also gives the patient calcium salts in which he has confidence, believing that they promote healing and calcification of tuberculous lesions. In this he more or less follows the modern French treatment as regards “demineralisation” and “remineralisation,” on which so much stress is laid in some cliniques in Paris.

The author expresses himself clearly and suggests some points in regard to tuberculosis and its treatment which might be further investigated with advantage.

Minor Maladies and their Treatment. By LEONARD WILLIAMS, M.D., M.R.C.P.; Physician to the French Hospital; Physician to the Metropolitan Hospital; late Assistant-Physician to the German Hospital; and Hon. Medical Officer to the Sidmouth Cottage Hospital. Third Edition. London: Baillière, Tindall & Cox. 1913. Cr. 8vo. Pp. viii + 396.

THIS book belongs to a class of sound, practical medical works which are only too few in number. Its pages are full of information, expressed in clear, flowing language, and based on a ripe clinical experience. This is what we like about the work. By the way, some of the maladies discussed by the author are by no means “Minor”—take, for example, diphtheria.

The first edition of “*Minor Maladies*” was published in 1906. It was favourably reviewed in the number of this Journal for February, 1907. The second edition appeared in 1908, and of it we had an opportunity of

expressing our appreciation in the number of the Journal for September of that year.

Numerous prescriptions are scattered through the book. In one (page 12) we noticed a slip, syrup of squill (instead of tincture) being prescribed with carbonate of ammonium.

The volume remains of the same convenient size, and its contents have been carefully revised and brought up-to-date.

YEAR-BOOKS.

1. *The Medical Annual* : A Year-Book of Treatment and Practitioners' Index. 1913. Thirty-first Year. Bristol : John Wright & Sons, Ltd. 8vo. Pp. cxxviii + 872.
2. *The Year-Book of the Scientific and Learned Societies of Great Britain and Ireland* : A Record of the Work Done in Science, Literature and Art during the Session 1911-1912 by numerous Societies and Government Institutions. Compiled from Official Sources. Twenty-ninth Annual Issue. London : Charles Griffin & Co., Ltd. 1912. 8vo. Pp. vi + 373.

1. FOR thirty years Wright's Medical Annual has grown in favour with the members of the medical profession. It has met a want felt by specialists and general practitioners by providing a well-edited summary of the current medical literature of the world at a very reasonable price in a well printed handy volume, containing an immense mass of information given in sufficient fulness to be intelligible and readable, and where necessary illustrated by excellent diagrams, coloured prints and engravings. A new feature in the present volume is the addition of a glossary of the newer medical terms used in this issue ; it is one which the ever-advancing science of Medicine has made necessary, and should be welcomed by the subscribers to the annual.

It is difficult to do justice to the value of the book, or to realise what labour the work of arranging, classifying

and editing the immense mass of material that it embodies. But all must recognise that the completed work is an annual which gives a clear synopsis of medical progress throughout the world, in clear language and with sufficient fulness to be helpful to the practitioner and specialist.

2. THE title of this annual fully discloses its scheme : to chronicle the work done during the previous session by our many scientific, literary, art societies and government institutions. And as the information is compiled from official sources, it is trustworthy. The exceptionally rapid progress in knowledge in the present day calls for such a reference book ; and its increasing circulation, which is steadily progressive, tells that it meets the wants and has the approval of its readers.

Section XIV., devoted to medicine, occupies sixty pages, and gives a full index to medical progress during the past session.

During its twenty-nine years of publication we have had frequent occasion to consult the work, and we have found it most helpful. It is practically a triple index of authors' names, titles of papers, and of the subject-matter; and the references are full and accurate—a veritable boon to the busy man to whom research means trouble and loss of time.

A Treatise on Pellagra for the General Practitioner. By EDWARD JENNER WOOD, S.B., M.D. ; Chairman of the Pellagra Commission, North Carolina Board of Health ; &c. Thirty-eight Illustrations in Text. New York and London : D. Appleton & Co. 1912. Demy 8vo. Pp. xiv + 353. Index, pp. 24.

PELLAGRA is a disease of little interest to the practitioner at home, although in many of the warmer countries under our control it is yearly being recognised as of more and more importance. Known for centuries in Italy, recognised nearly as early in Spain, and discovered on investigation to have been destroying far and wide in other

Southern European countries, chiefly in Austria-Hungary, and the Balkan States, and in Egypt, it was only recognised by medical men in the United States of America in 1905. It may then have been a new importation, but it seems more probable that, although present for many years, it has latterly begun to spread more rapidly, and has in addition been more widely recognised. Many of the earlier cases in America were of a fulminating type, rapidly producing insanity or death, but the later cases are settling down into the type previously studied in Italy.

An endemic disease of unknown cause, occurring usually in temperate and subtropical countries, pellagra is characterised by symmetrical skin lesions, chiefly of the exposed parts of the body, by gastro-intestinal disturbances, and by changes in the nervous system. It is generally chronic in nature and terminates in recovery, insanity, or death. It has been observed at all ages from one month to over eighty years. The skin lesions show a peculiar annual recurrence, in Europe and America usually in March or April, as early as January in Egypt. The appearance at first suggests sunburn, and is certainly connected with exposure to bright light, but later there is much more marked exfoliation and pigmentation. After the first attack there is usually a complete return to normal, but each succeeding year the attack is more severe and leaves more permanent results. At the height of the attack nervous symptoms appear, alteration of reflexes followed by various parasthesias, vertigo, &c., and later we find melancholia, unfounded anxiety, or profound depression, slowness of cerebration, and muscle weakness or partial paralysis. At the same time there are usually present stomatitis and diarrhoea. Finally, there occur great cachexia and weakness, increase of all the previous nervous and psychical symptoms, profuse diarrhoea and severe stomatitis, death taking place from heart weakness or intercurrent disease. As the author says: "Certainly no class of people will appeal so strongly to the humane medical man as the pellagrin, for in no disease is there found such a picture of abject despair."

As one of the commonest results of pellagra is insanity, a search in the asylums of the United States has revealed many cases which had hitherto been grouped as dementia paralytica, &c., the symmetrical skin lesions of the face and backs of the hands being looked on as a chance association. Whether a similar search in the institutions of these countries will reveal similar cases remains to be seen. Throughout the Southern States "pellagra is the live topic of medical interest"; in North Carolina for instance it is second only to tuberculosis in importance, as by 1910 the Board of Health estimated the number in that state at 3,000, and it is believed that now the number is nearer 10,000. In 1910 one authority estimated that there were 100,000 cases in the United States, and predicted that half a million would be recognised by 1912.

For two and a half centuries the cause of pellagra has been believed to be the consumption of bad maize, but recently there has been a tendency to doubt this, and Dr. Wood is quite satisfied that the maize theory must be definitely abandoned. He holds that the disease is parasitic, and probably protozoal, and showing its similarity to both syphilis and trypanosomiasis believes it to be carried by some biting insect. That the insect is a fly of the genus *Simulium*, as held by Sambon, he treats wisely as an open question as it has not yet been proved, although he gives certain arguments for believing its truth.

The book under review gives a very full account of the history, geographical distribution, theories of ætiology and clinical features of the disease, and discusses its diagnosis, prophylaxis and treatment. Fortunately, the treatment appears to be the bright spot in the whole treatise, as the author's experience of atoxyl has been uniformly good. He usually gives 5 to 7 grains at first every fourth day, afterwards at longer intervals, until a total of 100 grains has been given. Salvarsan he has tried and found unsuccessful, which he believes to be due to the necessity for continuing the treatment with arsenical compounds for a considerable time. Soamin in the hands

of some other workers has also given good results. A curious delay in the cure has been found in several cases discharged as incurable, but which subsequently showed a complete recovery, the action of the atoxyl having apparently been very slow, or possibly the morbid condition having long survived the death of the parasite.

Modern Wound Treatment and the Conduct of an Operation.

By SIR GEORGE T. BEATSON, K.C.B., B.A. (Cantab.), M.D. (Edin.) ; Surgeon, Western Infirmary, Glasgow ; and Senior Surgeon, Glasgow Royal Cancer Hospital. Edinburgh : E. & S. Livingstone. 1913. Cr. 8vo. Pp. v + 106.

THIS is a nicely turned out little book dealing with first principles. If more space had been given to methods of dealing with septic wounds, which are far more difficult to treat than the clean wound, the latter after all only require to be stitched up and left alone.

The chapter on Lord Lister is most interesting. One is sorry that the author, who was Lord Lister's dresser in 1871, does not tell us more about the originator of modern surgery.

Lectures on Diseases of Children. By ROBERT HUTCHISON, M.D., F.R.C.P. ; Physician to the London Hospital and Physician, with Charge of Out-Patients, to the Hospital for Sick Children, Great Ormond Street ; Author of " Food and the Principles of Dietetics " and " Applied Physiology ; " Joint Author of " Clinical Methods." Third Edition. London : Edward Arnold. 1913. Demy 8vo. Pp. xii + 404.

WE have much pleasure in favourably reviewing this edition of Hutchison's well known work. Since its first appearance some years ago we have looked upon it as the best extant work on diseases of children for the use of students, and we have continually recommended it in our clinical lectures. The appearance of a third edition

attests its widespread popularity. The author apologises in his preface for the colloquial style adopted, but, in our opinion, it is this very style that gives the book its characteristic charm, and which forces attention and commands interest when a more learned and elaborate treatise would be thrown aside. One feels that the author is speaking to one, not about statistics and out of the way theories, but about the patients which he as a practical man is meeting and dealing with daily. The book is well illustrated by means of photographs of patients, and in the present edition is considerably enlarged. An interesting and useful chapter on Cœliac Disease is added, and in other directions there is some new matter included. We venture to hope that in the new editions, that we foresee, no attempt will be made to enlarge the book out of recognition. There are plenty of elaborate treatises on the subject. This book is *sui generis*. T. G. M.

Venereal and Generative Diseases. A Practical Manual of Venereal and Generative Diseases, Spermatorrhœa, Impotence and Sterility in both Sexes. By GERALD DALTON, late Assistant Surgeon St. Francis' Hospital and Lecturer to Nursing Staff; Assistant to Skin Department, Charing Cross Hospital; Lecturer on Ambulance, London County Council; Member British Medical Association; Member West London Medico-Chir. Society; Hon. Sec. Assoc. Physicians and Surgeons; Author of "Gleet and Chronic Diseases of Prostate," "Modern Treatment of Gonorrhœa," "The Aix La Chapelle Treatment of Syphilis," &c. London: Henry Kimpton; Glasgow: Alexander Stenhouse. Crown 8vo. Pp. viii + 156.

"VENEREAL and Generative Diseases," by Gerald Dalton, is the title of a little book which, for descriptive purposes, may be said to consist of two parts. The first portion relates to venereal diseases, and the second to abnormalities of the generative system. The author's description of venereal diseases might form a suitable course of

study for "skilled rubbers" and nurses attending (under medical direction) on venereal cases.

The chapter on maladies of the generative system are more interesting, because of the comparative rarity with which these subjects are included in books on venereal diseases.

We are not conscious that this work supplies any want in the literature of the subjects to which it is devoted. The book is of little cost, however, and general practitioners desiring information on disorders of the generative system, other than those usually understood by the expression "venereal diseases" may benefit by its perusal. S. S.

The Bacterial Diseases of Respiration, and Vaccines in their Treatment. By R. W. ALLEN, M.D., B.S. (Lond.); late Editor "Journal of Vaccine Therapy;" late Clinical Pathologist to the Mount Vernon Hospital for Diseases of the Chest; late Pathologist to the Royal Eye Hospital; late Gull Student of Pathology, Guy's Hospital. London: H. K. Lewis. 1913. Royal 8vo. Pp. x + 236.

THIS book bears evidence of the careful and thorough study devoted to the subject of the bacteriology of respiratory diseases by the author. Most of the text has already seen the light in the pages of the *Journal of Vaccine Therapy*, but it is undoubtedly convenient for the practitioner to have the series of papers collected together as a single volume. If one has any criticism at all to offer it is that the book is a little too long for the subject. A more concise account of the bacteria met with in diseases of the lungs and of vaccine therapy in connection therewith would have been more attractive to the general reader, and probably as useful as the present work. Moreover, each specialist has his own store of experiences to call on, and therefore hardly requires all the details that he is here furnished with. At the same time the book is undoubtedly most useful, for, after it is once read over,

one can utilise it as a reference work in relation to special points that crop up in the course of vaccine therapy. Amongst the most interesting points dealt with we may refer to the author's experiences of the effects in bronchitis of vaccine injections. We wonder has it ever occurred to him that equally good results are often obtained without any vaccines at all. The results claimed in ozæna are of great interest and importance, and we hope that further experience of this disease will bear out the author's observations. As regards tuberculosis, we are in complete accord with the author as to the advisableness of killing off secondary infections as well as the tubercle bacillus itself. In this attempt vaccines at present seem to be our most important weapon. We recommend this work cordially to all who are interested in vaccine therapy.

The Bradshaw Lecture on the Biology of Tumours. Delivered on December 5, 1912. By C. MANSELL MOULLIN, M.A., M.D. Oxon., F.R.C.S., &c. London: H. K. Lewis. 1913. Demy 8vo. Pp. 39.

IN this lecture Mr. Moullin deals with the origin of neoplasms from an embryological standpoint. He emphasises many important points, among them he insists on the absence of any division being made between so-called benign and malignant tumours. He takes us back to the origin of life, and shows that early in the history of animal organisms, differentiation in cells took place, so that certain cells acquired the function of perpetuating the species and all the other cells took over the task of enabling them so to do by providing nutrition, skeleton, &c. He points out that when these somatic cells lose their proper function, and cease to work for the benefit of the whole organism, they retain the power of division and multiplication, and on this perverted function all the activity of the cells is spent, with the result that a tumour forms, which acts as a parasite on the host. Teratomata arise from the division of multipotential germ cells, whether they be accidentally misplaced or in their

usual situations. The controlling power which maintains the mutual relations of cells is hereditary transmission of function and place, an attribute which dates from time immemorial. This lecture affords much food for thought and is well worth the hour which it takes to read it.

The Surgical Clinics of John B. Murphy, M.D., at Mercy Hospital, Chicago. Published Bi-monthly by W. B. Saunders Co. Vol. I. Nos. 1-6. 1912. 8vo.

THE first six of this series have now been published. We are glad to notice a very marked improvement in the correction of the verbatim reports of Dr. Murphy's clinics. In some earlier numbers the meaning of the lecturer was not clear, which was perfectly natural, as we doubt the possibility of any verbatim report of a demonstration or of remarks made during an operation being clear to any except onlookers.

However, the reports taken as a whole are most instructive and well worthy of being read carefully by any medical man. Of course, operating surgeons will reap more benefit than physicians, but yet Dr. Murphy's views are always instructive and decisive. If at the end of every sixth number an index were published the value of the work would be greatly enhanced.

A Treatise on Hygiene and Public Health, with Special Reference to the Tropics. By BIRENDRA NATH GHOSH, L.M.S. (Cal. Univ.), Fellow of the Royal Institute of Public Health, London, Member of the German Society of Tropical Medicine ; and JAHAR LAL DAS, L.M.S. (Cal. Univ.), Health Officer, Maniktala Municipality, Calcutta, formerly Special Health Officer Ghazipur, U.P. With an Introduction by COLONEL KENNETH MACLEOD, M.D., F.R.C.S., I.M.S. (retired). Calcutta : Hilton & Co. 1912. Cr. 8vo. Pp. xi + 378.

THE object of the authors of this book has been to produce a text-book of moderate size which, while dealing with

the whole subject of hygiene and public health in general, will bear special reference to tropical climates. Standard European works have been drawn upon largely, but one constantly recognises the endeavour to adapt the principles of rational hygiene to tropical conditions of life. The chapters on food and on tropical diseases are of special interest, and should be of value to Europeans who propose to live in India. We think that the authors have been scrupulously fair in dealing with subjects in regard to which European and Asiatic sentiments are at variance. A perusal of the book makes one realise in some measure the magnitude of the difficulties by which the sanitary service of India is beset.

The book gives promise of aiding that service in its work, and we consider that the authors have succeeded admirably in their task.

Le Laboratoire du Praticien. Analyse clinique. Par PAUL GASTON. Deuxième Fascicule. With 24 Plates, showing 423 Illustrations in colours and black and white, by LOUIS NECHET. Paris : A. Poinat. 1913. Pp. 52.

THIS is the second booklet in a series of three, designed to put clinical pathology more within the scope of the practitioner. Though we may doubt the wisdom of this effort, we must admit that the authors have done their part well. This "fasciculus" deals with blood examinations and the various bacteria and parasites that usually infest the human subject. There are sections dealing with ordinary bacteria, protozoa, moulds, spirochætæ, blood examination and cytological diagnosis. There are many illustrations to show the use of the ultra-microscope. The coloured plates are excellent and very complete. Criticism might be levelled at the brevity of the directions as to the technique of reactions which require care and experience. The booklet would be an addition to the library of most practitioners.

PART III.

MEDICAL MISCELLANY.

Reports, Transactions, and Scientific Intelligence.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

President—WALTER G. SMITH, M.D., F.R.C.P.I.

General Secretary—J. A. SCOTT, M.D., F.R.C.S.I.

SECTION OF ANATOMY AND PHYSIOLOGY.

President—B. J. COLLINGWOOD, M.D.

Sectional Secretary—A. A. M'CONNELL, M.B., F.R.C.S.I.

Friday, January 24, 1913.

THE PRESIDENT in the Chair.

The Adequate Stimuli of the Respiratory Centre.

PROFESSOR T. H. MILROY read a paper on the above subject. He described the methods of studying the influence of nervous factors in the production of apnœa, and also the effects of various gas mixtures on the quiescent centre. The following conclusions were tabulated:—(1) Alterations in the rate or degree of distension of the pulmonary alveoli, when the amount of ventilation is constant, do not affect the duration of the apnœic pause in any constant direction; but a repetition of ventilation periods tends to prolong the pause. (2) Removal of the vagal control does not interfere with the production of the apnœic pause. (3) Any rise in the CO₂ content of the air used for ventilation shortens the apnœic pause, and any increase in the carbonic acid content of the gas mixture used to distend the lung after pulmonary ven-

tilation with air shortens the period. With increased CO_2 content of these gas mixtures irrespective of the amount of oxygen, the apnœic pause proportionately decreases. (4) Injection of small quantities of acid solutions directly into the carotid during the pause leads to respiratory movements of an exaggerated type, as does also injection into the central end of the carotid and into the external jugular vein to a less degree. (5) With the excitation of such respirations during the pause there is associated an increased passage of carbonic acid from pulmonary blood to air. (6) These effects are produced after removal of the vagal control, but the excitability of the centre under such conditions seems to be diminished. (7) The passage of CO_2 from alveolar gas mixtures to blood, or from blood to alveoli, seems to depend entirely upon the difference of the pressure of that gas in the blood and air in the alveoli. (8) It seems most probable that the effective stimulus of the respiratory centre rendered quiescent by over-ventilation is a rise in the carbonic acid concentration in that centre, whether brought about by the normal rise in carbonic acid formation during the pause, with its associated rise in the CH^1 , or primarily to a rise in the CH^1 from the formation of acid products of incomplete oxidation giving rise secondarily to an increase of the free CO_2 tension.

PROFESSOR W. H. THOMPSON, DR. O'CONNOR, and THE PRESIDENT spoke, and PROFESSOR MILROY replied.

MR. M. T. M'MAHON gave a demonstration of the action of thrombin and antithrombin.

THE PRESIDENT pointed out that this preparation of thrombin acted equally well in purpura hæmorrhagica and in hæmophilia.

MR. SHERIDAN had used this preparation with success for persistent bleeding after extraction of teeth.

PROFESSOR W. H. THOMPSON described some new standard solutions for the estimation of creatinin by Folin's method, and also described a modification of Benedict's method for estimating urea.

THE PRESIDENT and PROFESSOR MILROY spoke, and PROFESSOR THOMPSON replied.

SECTION OF PATHOLOGY.

President—PROFESSOR A. H. WHITE.

Sectional Secretary—W. BOXWELL, M.D., F.R.C.P.I.

Friday, February 14, 1913.

THE PRESIDENT in the Chair.

A Case of Congenital Tumour of the Gum.

MR. WILLIAM PEARSON first gave an account of the rarer varieties of tumours found in connection with the buccal cavity with their embryological significance. The varieties discussed were odontomata, dermoids, and teratomata. The case was that of a male infant, born on the 1st of October, 1912. The mother was a strong, healthy, primipara; pregnancy was quite uneventful; labour occurred at full term, and the child was delivered naturally after fourteen and a half hours' labour. Projecting from the mouth was a large, fleshy-looking mass which gave the child a most unsightly appearance, and prevented him taking any nourishment. Mr. Pearson was asked by Dr. Solomons to see him. On examination, projecting from the mouth were two smoothly-rounded, ovoid tumours. The larger lay on the right side, and was the size of a hen's egg, the smaller was the size of a damson plum. They were bright pink in colour like mucous membrane, but the larger of the two was congested and becoming almost black in parts. They had appreciably increased in size since birth. They felt firm and solid in consistence like uterine fibroids. They were attached by very short slender pedicles to the free border of the gum of the upper jaw, slightly to the left of the middle line. The pedicles were transfixed and ligatured, and the tumours cut away. It was then seen that immediately to the outer side of the pedicle of the smaller growth two other small, rounded tumours, like little berries, were sprouting from the gum, and these were also removed. Examination of the child on the 12th of February, 1913, showed the mucous membrane of the gum to be smooth all

round, so that no evidence of the former presence of these growths could be seen. The nasal cavities and pharynx appeared normal in every way. A description of the histology of the tumours was given by Prof. A. C. O'Sullivan, who kindly made sections and photomicrographs. Mr. Pearson was inclined to regard them as teratoid in origin, separation having occurred at such a period in embryonic life that the totipotent character of the cells had already been lost. Consequently comparatively little differentiation had occurred, with a corresponding absence of the complexity of tissues which is so characteristic of many teratomata.

In demonstrating the microphotographs of the sections, PROFESSOR O'SULLIVAN pointed out that the growth was covered with compound squamous epithelium, without any horny layer, and without papillæ, but otherwise normal. On the deeper parts the most striking feature was the appearance of a tissue suggestive of voluntary muscle, but without striation as far as he could see, and with nuclei contained *within* the fibres. These fibres were embedded in a tissue of the character of which he could not be certain. He thought it had originally been largely of one type—namely, muscle—but the fibres had atrophied. The tissue otherwise looked like œdematous connective tissue.

PROFESSOR McWEENEY said that the impression made on his mind on seeing the photographs and looking at the preparations did not correspond with his idea of either dermoid or teratomata. He looked on a teratoma as a tumour of connective and epithelial tissues mixed up in the wildest confusion, and his conception of a dermoid was something in which skin elements were mixed up and predominated. This tumour did not seem to him to correspond with either conception. It was covered with epithelium, underneath which was a mass of tissue composed of cells which were much the same as were to be seen in rhabdomyoma, and in addition to this it had an element in it which he did not remember being referred to—*i.e.*, very dilated spaces which were lined with endothelium, and which appeared to him to be dilated lymphatics. This would appear to him to bring the condition into the class of lymphangiomyoma. He suggested that it might have occurred by the accidental misplacement of a portion of the jaw muscles on the analogy of the mixed tumour of the parotid.

PROFESSOR SCOTT said he remembered seeing a slide made by Dr. Harvey which showed striation in the muscle fibres very clearly. The section was different from the sections now shown, and it then struck him that there was an astonishing resemblance to cardiac muscles. This was not surprising seeing that cardiac muscle stood midway between the imperfectly differentiated smooth and the perfectly developed striated types. He pointed out that the differences between sarcomata beginning in very early life and the same tumours developing after years of latent potentiality were very slight. The possible sarcomatous tendency of this tumour was one not to be lost sight of. He considered that there was a strong affinity between mixed tumours such as those of the parotid and sarcomata.

MR. PEARSON, in replying to the remarks, said that his first impression was that the tumour *was* of the nature of rhabdomyosarcoma, but that clinically it did not suggest a sarcoma. He did not venture a strong view as to the type of the tumour, but he was inclined to regard it as teratoid. Complexity of tissue he did not consider an essential feature in teratoma at all. He suggested that it depended on the time it started in embryonic life. If it occurred at a late stage there would be less complexity than if it occurred earlier. Except for the fact that there was no skin or hair, the condition corresponded with the description given by Sutton of teratoma. The large spaces he looked on as dilated spaces caused by obstruction of the venous return through the narrow pedicle. The rapid increase in the size of the tumour and its livid colour supported this explanation. He did not really know what the exact nature of the tumour was, and he considered it a matter still unsettled.

PROFESSOR A. C. O'SULLIVAN, replying, said he was much interested in Professor Scott's remark that he had seen striation. No one thought it was dermoid, and he considered that there was little difference between his own view and that of Dr. O'Kelly.

A Case of Gumma of the Heart.

PROFESSOR E. J. McWEENEY showed this specimen, the subject being a man, aged thirty-six, who died suddenly without any premonitory symptom. At the autopsy (inquest case) the gumma was found to be the sole cause of death.

It was of unusually large dimensions, occupying almost the entire base of the left ventricle, and completely infiltrating the posterior wall and septum with a white, fleshy mass resembling sarcoma and consisting of confluent nodules, in the centre of which lay obliterated and necrotic areas. The new growth fungated through the septum into the right ventricle near to the attachment of one of the tricuspid segments. Microscopically, it consisted of lymphocytes, plasma-cells (which were very numerous), epithelioid and fibroblastic elements, and giant cells. The latter were very numerous. Their mode of formation and differences from those of tubercle were discussed. Eosinophils were common. Whilst the newly-formed granulation tissue was nourished by somewhat scanty capillaries also of new formation, the pre-existing blood-vessels were the seat of a most typical and intense *endarteritis obliterans*, as the result of which they themselves, with the surrounding tissue, became necrotic. This feature stamped the process as syphilitic, although efforts to demonstrate the *treponema* had not been successful. The sudden *exitus* in this case was doubtless due to interference with the conducting tracts of the heart.

DR. BOXWELL said with regard to the rarity of gumma of the heart it would be remembered by members of the Section that he had shown a specimen of the condition last Session and another in the previous year. In both cases the condition caused sudden death. The appearance of one of the specimens shown by him was extremely like the one now exhibited, except that the plasma cells were less obvious, and the gumma suppurated and had become infected and was discharging pus into the left ventricle. Dr. W. G. Harvey had shown a large solitary tubercle of the ventricle at the same meeting in the case of a child aged twelve years.

DR. O'FARRELL referred to a dictum of Professor McWeeney regarding tubercular giant cells and tubercle bacilli, and suggested that the same inverse proportion might hold good in the case of syphilitic giant cells and *treponemata*. He thought the basophilic cytoplasm of the syphilitic giant cell was characteristic.

PROFESSOR McWEENEY, in replying, said that when he referred to the rarity of the specimen he was only referring

to his own experience. He understood that on the other side of the Channel the condition was by no means rare. Referring to Dr. O'Farrell's remarks he said that it struck him as extraordinary that there should be so much structural change in the practically complete absence of syphilitic organisms. It might be said that it was the products of the organism that were doing the mischief, but how could its products be there if the organism was not there itself? Here you had an abnormal structural change and no spirochetæ, yet the process was undoubtedly syphilitic. He thought that the precise relationship of gummata and spirochetæ was only partially understood.

The Theory of Immunity and Therapeutic Immunisation.

DR. MERVYN CROFTON read a paper on the above subject. The objects of the paper were to suggest (1) that the toxins of the microbes are ferments by which the microbe breaks down the living protoplasmic molecule, and that antitoxins are anti-ferments just as anti-trypsin is. (2) That bacteriolysis brought about by immune body and complement is an exactly similar process to the lysis of carbohydrates, fats and proteins by the tissue cells. (3) That opsonisation of a microbe can be brought about in three ways—(a) by the attachment of heat-labile complement like opsonin; (b) by the interaction of immune body and complement; (c) by immune opsonin (probably antitoxin), by itself. (4) That Wright's technique for estimating the opsonic index does not take the last two methods into consideration, and is, therefore, an unreliable guide to the dose that must be attained in any given case.

The paper was illustrated by lantern slides showing the method adopted by the author in immunisation.

DR. ROWLETTE said that the paper gave rise to various points for criticism and difference both as to the theory and practice. In discussing the theory of immunisation he understood Dr. Crofton to have attempted to identify the thermo-labile and thermo-stabile opsonins with the complements and immune body respectively. Dr. Crofton seemed to him to leave out of count altogether any of the other protective bodies formed in the process of immunisation. He (Dr. Rowlette) did not see any reason for the opsonin body

being picked out and identified with immune body. There might be an extremely high opsonic index while the patient was dying, as in the case of cerebro-spinal meningitis. He considered that Dr. Crofton should bring forward more convincing arguments before this view could be accepted. Referring to the practice, he agreed with him that to a very great extent one might be guided as regards dose and the spacing of the dose by the clinical signs without observing the opsonic index, but he considered the opsonic index as the greatest use in cases of mixed infection. His experience had shown him that there was the greatest difficulty to be met with in cases of mixed infection. The slides shown were interesting and demonstrated that with the use of increasing and very large doses good results could be obtained. Some years ago he was much impressed by a demonstration by Dr. Crofton with regard to increasing dosage, but in every case in which he (Dr. Rowlette) had tried to increase the dose he found the local reaction so marked that he considered it would be better to increase the dose very slowly. He thought if doses could be given which just escaped focal reaction as good results could be obtained.

DR. O'KELLY said with regard to vaccine therapy he considered it very hard to know how much to attribute to vaccine treatment, as in the case of bone disease if the diseased substance was removed the condition might improve rapidly without any vaccine treatment, and the same might be said of pyorrhœa alveolaris.

DR. O'FARRELL said he could not agree that opsonin could be compared with complement. He was very much impressed by the size of the doses, and considered that in the cases in which the vaccine failed it was often because it was not pushed far enough. He thought a great deal was due to Wright, as the dosage at present known was entirely due to his work and also the intervals. He agreed that the opsonic index was unnecessary now in every case. The injection of streptococcus vaccine during high temperature was very remarkable. He had experience of one case in which vaccine was given when the temperature was high, and it came down, but as a general rule his practice was to give serum instead of vaccine in cases of high temperature.

PROFESSOR COLLINGWOOD asked Dr. Crofton whether he regarded the estimation of opsonin as an estimate of the

“immune body” or of the “complement,” as much depended on the answer to that question.

THE PRESIDENT said he would join issue very strongly with regard to the method of giving very large and increasing doses. He considered that in most of the cases in which a large dose was given it came at the time when the patient was well, and of course enormous doses might be given to a person who is normal, and the same with cases well or almost so. Personally, he considered every case had its own therapeutic maximum dose, and when this was reached the maximum result was produced. A start might be made with a very small dose and increased gradually with very good results. Looking back during a period of seven or eight years over a very large number of cases of surgical tuberculosis he found that the dose that he was now giving was very much less than he was wont to give in the earlier times, and comparatively better results were produced. He considered that if suitable doses of tuberculin were given 90 per cent. of all surgical cases might be cured, and the same would hold good with other infections. In cases of furunculosis, if large doses were given the boils would get worse. Such a vast amount of facts have now been accumulated in connection with vaccines that cases could generally be dealt with on clinical grounds. For instance, even with tuberculin inoculations a very small dose might be given, and the patient might exhibit some signs by which, with a certain amount of experience, one could tell if the dose had been too large, and these signs might fall far short of any actual rise of temperature. It might be nothing more than a sense of lassitude.

DR. CROFTON, replying to the remarks, said that there was no question that anti-bodies could be produced by repeated small doses; but unless all the microbes had been killed off there could be no guarantee against re-infection. He disagreed with those who said that a beginning should be made with a comparatively small dose. With regard to mixed infections, good results could not be obtained if only one vaccine was used. He agreed with the use of serum in acute cases. In answer to Professor Collingwood, he believed that when Wright's technique was used the estimation made was one of the feebly specific thermo-labile opsonin—in other words of complement—and not of a true specific immune body.

SECTION OF SURGERY.

President—R. D. PUREFOY, M.D., F.R.C.S.I.

Sectional Secretary—C. A. BALL, M.D., F.R.C.S.I.

Friday, February 21, 1913.

THE PRESIDENT in the Chair.

Nephrectomy.

MR. C. ARTHUR BALL read a paper on the above subject, illustrating his remarks with lantern slides. He pointed out that the operation of nephrectomy had not been discussed much of late, although it was one with a high mortality. He stated that the improved methods of diagnosis had greatly reduced this mortality, but that there still remained a risk attached to nephrectomy which was probably greater than that of any other major operation—that is, the danger of hæmorrhage. Mr. Ball stated that enough attention is not attached to this danger in the teaching of the subject, and expressed the opinion that the kidney could be more readily reached from the front by an iliac extra-peritoneal incision, like that recommended for exposing the lower part of the ureter. This incision can then be extended upwards and backwards in the direction of the external oblique fibres if more room is needed. Mr. Ball stated that this was the incision he always employed, and pointed out that by it the vessels of the pedicle could be readily exposed, and any abnormal vessels could be easily seen and dealt with more safely and easily than by the lumbar incision. He stated that the student should be taught this incision, and that, in his opinion, lumbar nephrectomy should be classed with lumbar colotomy and given up.

THE PRESIDENT thanked Mr. Ball for his paper, which dealt with a subject of great importance and interest. He had heard of such accidents happen as were described, and he mentioned that many years ago, in the Rotunda Hospital, he had operated on a patient for a large abdominal cyst, and on opening the abdomen—thinking that the cyst was ovarian—he found it to be a cystic adenoma of the left kidney. He did not succeed in removing it entirely, and

within two years the patient returned with malignant disease. This illustrated the fact that a renal affection may very closely simulate an ovarian cyst.

MR. MAUNSELL congratulated Mr. Ball for bringing forward the subject in such a remarkably simple manner. He thought it was not shown with sufficient lucidity what position the patient was put in, but he took it that Mr. Ball started the operation with the patient lying on the back. He considered that the large incision was more for a case where the diagnosis had been formed and that a nephrectomy was going to be done. It seemed to him a little too much to make this incision where the operator was going to go down on the kidney and possibly save the organ. He had, like Mr. Ball, when a student, seen cases of death from hæmorrhage, but he never had a case himself, and this he attributed to the fact that where he found a kidney very adherent and matted from chronic disease he adopted subcapsular nephrectomy. When the kidney was very adherent he thought it was useless to try and get it out by any other method. He had used the incision advocated by Mr. Ball where he was searching for a stone low down in the ureter, before the present *x*-ray appliances were available. In another case he used the incision for a large multicystic kidney in a young child, and it worked very satisfactorily. Another incision that he had found useful was the ordinary lumbar incision made slightly longer, and an incision cut at right angles up along the external oblique. This he found gave excellent room.

SIR JOHN LENTAIGNE said he agreed with the remarks of the last speaker. In connection with the subject he considered that the efficiency of the other kidney was the most important point to look into, and it was always the one that he weighed before operating on a kidney. The fear that the other kidney might be out of use is the thing which should influence the operator most in his procedure. In cases of tuberculosis there was a real danger, as in a late stage of the disease it spreads down the ureter to the bladder, and then almost at once an ascending tuberculosis starts which would surely attack the other kidney. He thought that the cystoscope alone would not tell at once whether the other kidney was working, nor would segregation of the urine tell. At one time it was thought that by diverting the urine from

each ureter into separate channels one could tell whether the other kidney was functioning or not. Ureter catheterisation was the only reliable test, but unfortunately this was a procedure which could not always be easily carried out. Even the most expert men had found it impossible to use the ureter catheter in every case. In about 30 per cent. of cases this method could not be availed of. A procedure which he found efficient was a double incision. By cutting down on both kidneys and palpating, one was able to tell whether the kidney and ureter on opposite sides were all right, and the patient appeared to be nothing the worse. He did not consider the danger of hæmorrhage quite as great as Mr. Ball said it was. In cases of perinephric inflammation he had found the sub-capsular method the best.

MR. KENNEDY, said that, in common with other speakers, he wished to say how admirably Mr. Ball had elucidated the operation. He also was at a loss to know how far the incision was carried upwards. He considered that it began rather too low down, as the ureter, he thought, could be explored very well with the incision not coming so low down. He considered it a very sweeping thing to condemn the lumbar operation, as by combining the incision at right angles with lumbar incision the largest kidney could be taken out. In a case which he had sixteen months ago of very slow growing tumour of the kidney, lasting over eleven years, he carried out the incision spoken of by Mr. Maunsell, and found no trouble, although the kidney was a very large one. He referred to the use of a clamp for removing hæmorrhage. If the pedicle of the kidney was taken up and clamped before the vessels were isolated, the latter could afterwards be taken up and tied individually, and this he considered would do away with hæmorrhage. It was, he said, astonishing what amount of room was provided by the freeing of the last rib.

MR. PEARSON said he had the pleasure of seeing two or three nephrectomies by the incision described, and to his mind it is the ideal procedure. The ease with which the operator can see what he is doing was very remarkable. His recollection of the incision was that it was more of a lateral incision. He did not think the incision was a big one at all, and it struck him as being better than the lumbar one. He thought that getting a clamp on the pedicle in a fat subject

was not such an easy thing to do. The clamp might not be got round all the vessels; some very large ones might easily escape, and he considered that there was considerable danger of the pedicle being cut so close to the blades of the clamp that they might slip out of it.

MR. H. STOKES said that the practice of a surgeon who had performed forty nephrectomies without a single death was not to tie himself to any particular incision. He considered that it was best to plan the incision according to the type of case that was being dealt with. He did not consider the illustration of a kidney shown on the screen was a fair type. He would not like to be called on to attack such a kidney.

MR. C. A. BALL, in replying to the remarks, thanked the members of the Academy for the way in which they received his communication. He was pleased to see that it had evoked such an interesting discussion. As to the position of the patient, he said he generally started by laying the patient on the back, inclining the body a little to one side. The incision was like the lumbar iliac incision shown on the slide. He usually started with a small incision of about four or five inches, and if there was not room enough he extended it higher up. It was astonishing what a small incision would do with a thin patient. No one now hesitated to open the abdomen for an exploratory operation, and he, therefore, saw no reason why this incision might not be made. He also recommended the incision for removing calculi, as he had seen kidneys very seriously damaged by the lumbar incision. He had only once seen sub-capsular operation, and had never performed it; but in cases of tumour of the kidneys it was an operation that could not be used. In connection with Mr. Kennedy's remarks he pointed out that his object was not so much to try and convert those who had performed lumbar nephrectomy satisfactorily as to show that if students were taught that this anterior incision was a much safer method it would be an advantage. There was no reason to ask those who had found the lumbar incision satisfactory to change their technique. He considered the T-shaped incision more damaging to the muscles. Referring to Sir John Lentaigne's remarks he said that, of course, the efficiency of the other kidney should be decided on beforehand, and if one wished to palpate the kidney it could easily be

done by this incision. He had made use of this incision, opening the peritoneum for exploratory purposes, and the opposite kidney can be palpated in this way much easier than by making the double incision for both kidneys. Replying to Mr. Stokes he said that the illustration was an anatomical one taken from Cunningham's "Anatomy." He thought that it would be admitted that the anatomy taught was perhaps a little different from that met with in actual practice.

MR. MAUNSELL explained that any little adversity shown by him towards the operation described was founded on a misconception, as he did not understand from the original explanation that the incision was a short one. He thought Mr. Ball meant cutting the patient right up to Poupart's ligament.

The Location of Pus in the Hand (illustrated by specimens and lantern slides).

MR. A. A. M'CONNELL read a paper on the above subject. He pointed out that there were definite spaces in the hand independent of the tendon sheaths in which pus may collect; that the diagnosis of pus in these situations can be made, and that special incisions are required for adequate treatment. He adopted the nomenclature introduced by Kanavel, of Chicago, and in the main advocated the treatment employed by him. Clinical cases were cited, however, which went to prove that adequate drainage of the middle palmar space could be carried out by placing an incision behind the web of one or more of the fingers, and introducing a drainage tube. This incision avoided the digital vessels and nerves, and proved as effective as Kanavel's palmar incision. He showed specimens and lantern slides illustrative of his remarks, and pointed out that the majority of anatomical and surgical text-books gave an inadequate account of the anatomy of the hand and the treatment of its affections.

THE PRESIDENT said that he had listened to the paper with pleasure and profit. The fact that these injuries to the hand are so frequent, and may have such disastrous results if not well treated, invested the subject with the greatest importance.

DR. KEEGAN congratulated Mr. M'Connell on his interesting contribution. The subject was one of which very little had been said, yet one could not pass a week without seeing many cases. There was no doubt that the anatomical lines which should be followed for the correct treatment of cases of the kind was clearly pointed out, and he thought the diagrams shown demonstrated the many reasons why failure was met with in the early convalescence of such cases.

PROFESSOR DIXON said that the anatomical points raised were of great interest. For some time past the greatest difficulty had been felt in demonstrating the old-fashioned treatment for the palm of the hand. He had an opportunity of seeing the excellent preparations which Mr. M'Connell had made, and these preparations were even more convincing. The arrangements of the septum which he has described are very easily shown even without injections.

DR. H. STOKES said that he had come across the subject about a year and a half ago in the *Journal of Obstetrics and Surgery*, but Mr. M'Connell has put the matter in a very much clearer way. He would like to urge on him the importance of going on to investigate the cellulitis to be met with in the palm of the hand, and to bring the result forward in another paper.

DR. ADRIAN STOKES asked if the pus had progressed further than it should have done would the incision suggested be still sufficient to drain the palm of the hand, or did he suggest that the other incision spoken of would give better drainage?

MR. GUNN said he thought all the members of the Academy had learned a great deal from what had been said. He felt for a long time that in hospital practice septic fingers and hands were left very much to the residents and house surgeons, and that very disastrous results were often experienced where incisions are possibly made in wrong positions. There were few subjects of more importance than this, and he thought it deserved a great deal more attention.

MR. CRAWFORD said that a point of importance was that this method of making an incision of the web of the finger was a new one, and had been performed only by Mr. M'Connell himself. He had only one case of the kind since he had learned the method from Mr. M'Connell, and in that case, although the whole hand was œdematous, he determined to try drainage through incision of the web of the little

finger, and the result was very good, all the symptoms having subsided in three or four days.

MR. A. A. M'CONNELL, replying to the remarks, said that the only question he had to answer was with regard to the extension of the pus upwards into the forearm. He reproduced one of the slides on the screen, and demonstrated the best way to introduce drainage in such a case. It was pointed out that whenever there is pus in the forearm two incisions would be found more efficient.

Friday, March 28, 1913.

THE PRESIDENT in the Chair.

Acute Labyrinthitis.

MR. ROBERT H. WOODS showed a case of this condition with the following history. H. W., aged twenty-three, a fireman in the Navy, was admitted to Monkstown Hospital on the 4th of March, 1913, suffering from pain in the left ear, vertigo, and deafness. He had no fever while in hospital. Two days after admission a sero-purulent discharge appeared in the left external meatus and lasted for two days. On Monday, March 10th, he was transferred to Sir Patrick Dun's Hospital. He said that six years ago he had had a similar attack on the right side, from which he recovered, with complete loss of hearing on that side. There was slight fulness under the sterno-mastoid on the left side. The membrane was slightly inflamed. No pus was recognisable. He was so deaf that he was unable to hear questions even when shouted into his left ear. The deafness on the right side was absolute. There was slight spontaneous nystagmus and nystagmus after turning of small amplitude, lasting fifteen seconds, both to the left and right side. The tuning fork was just recognisable on the left mastoid. Schwabach was greatly shortened. His teeth are slightly jagged at the edges, the central upper incisors are slightly notched. Blood was removed for Wassermann, and reported a doubtful positive. The following day salvarsan was given intravenously, and mercury and iodide of potassium were prescribed. Hearing is gradually returning in the left ear. He can now hear conversation three feet away on the left side, but the deafness on the right remains absolute.

Central Dislocation of Hip.

MR. W. I. DE COURCY WHEELER showed a patient with a central dislocation of the hip, illustrating his remarks with skiagrams. The interest of the case lay in the rarity of the condition and the good functional result obtained by leaving the dislocation unreduced.

Two Cases of Subglottic Tumour.

MR. ROBERT H. WOODS read a paper on the above subject. The first case was that of a boy aged eleven years, who had been sent by Drs. Kelleher and Morris, of Waterford, in April, 1912. In the previous February he suffered from bronchitis, and from that time difficulty of breathing developed, and grew steadily worse. Stridor was very audible, and the supra-sternal notch sank during inspiration.

Bronchoscopy was performed under general anæsthesia, and a fungating granulomatous tumour was seen growing from the right wall of the trachea immediately above the bifurcation. The growth was removed by forceps. Bronchoscopy was repeated under local anæsthesia, and the tumour was gradually entirely removed. A skiagram showed thickening of the glands at the bifurcation of the trachea.

The patient was inspected on November 27th. There was then no trace of the tumour, and the opacity to x-rays had completely cleared up. The growth was "round-celled with many blood-vessels, apparently granulation tissue."

The second case was that of a man, aged forty, who for one year suffered from difficulty in breathing. The laryngoscope showed a tumour below the vocal cords apparently filling the whole trachea. The movement of the cords was free and the voice unimpaired.

The bronchoscope showed the growth to be fixed by a broad base to the anterior part of the larynx or trachea below and clear of the vocal cords.

A piece removed for examination was reported by Professor O'Sullivan to be malignant. Operation was performed and the growth removed by laryngofissure. It was found to grow from the cricoid cartilage. The patient made an uninterrupted recovery, but subsequently contracted typhoid fever, from which he died three months later. The trachea

was obtained, and the site of the growth was found to be perfectly healed.

THE PRESIDENT inquired what period elapsed between the convalescence from the typhoid and the second illness for which the abdominal operation had to be performed. He also asked if Mr. Woods had ever met with a similar tumour to the one described.

Mr. Woods, in reply, said that an interval of about three months had elapsed between his operation and the abdominal operation for the complaint to which the patient succumbed. Both of the cases now reported were unique in his experience. He was not aware that anything of importance was found *post-mortem*. So far as the tumour of the trachea was concerned the case was cured.

Intra-tracheal Insufflation of Ether—a Report of Cases and Demonstration of Apparatus.

MR. H. DE L. CRAWFORD then read a paper on the intra-tracheal insufflation of ether, and demonstrated his apparatus. This method was first introduced by Reltze and Aner in 1909, is an improvement on the inhalation administration of ether for experimental work, and ever since then had been used with marked success on human beings. It consisted essentially in forcing etherised, warmed, and filtrated air into the trachea at a point one inch above the bifurcation through a catheter which was passed through the larynx from the mouth. The air then returned between the catheter and laryngeal wall. The chief advantages were that it permitted full oxygenation of the blood even if both pleuræ were opened, that no blood, vomit or mucus could get down through the glottis, and that the anæsthetist was quite out of the surgeon's way in operations on the heart and neck. It was, therefore, indicated in operations on the thorax, head, mouth and neck. He had found the method quite free from danger and very satisfactory, but emphasised the necessity for using an automatic safety valve of mercury.

MR. R. H. WOODS agreed with Mr. Crawford that this method of administering ether would probably be largely used in future in certain cases. The difficulty of dealing with bleeding about the throat during operations in the nose,

mouth and pharynx was a very real one, and up to the present the way in which it had to be got over was by performing a preliminary laryngotomy and administering the chloroform through a tube. This method answered very well, but it involved an extra operation—a disadvantage which the method just described got over entirely.

SIR JOHN LENTAIGNE said that he had often felt the need for some means of producing positive pressure to do away with collapse of the lungs in operations on the chest wall, and the instrument shown would appear to do this. He hoped to have an opportunity of seeing the apparatus at practical work. In operations on the tongue he had been in the habit of adopting the procedure referred to by Mr. Woods, and gave the anæsthetic through a tube, and he would like to know if this apparatus would be suitable in such cases, seeing that the catheter passed over the site of operation, which would appear to be a disadvantage. Unquestionably in any case in which the chest wall has to be interfered with to any extent the apparatus must add enormously to the safety of the patient.

DR. KIRKPATRICK said that the Section was to be congratulated on having had from Dr. Crawford during this Session two papers on different methods of introducing anæsthesia, both of which were of the greatest importance. He had no experience of the method described, but theoretically it seemed to be one which would overcome some of the most serious difficulties with which anæsthetists have to deal. The administration of an anæsthetic for operations about the nose and throat was always attended by considerable danger to the patient. He did not know that the method spoken of by Mr. Woods was as safe as he had stated it to be, as the introduction of direct vapour by means of a tube without being heated previously was attended by a certain amount of risk, and he, therefore, considered that Dr. Crawford's method, which gets over this, was a very great improvement. He pointed out that the apparatus would be chiefly used for operations of the thorax, but thought there was a considerable field of usefulness for it in upper air-passages cases. He did not quite understand why it should have been specially useful for operations in the Trendelenburg position. He inquired if, after the administration of an anæsthetic in this way there

was any interference with the respiration subsequently, as it was to be expected after pressure had been kept up for some time there might be difficulty in re-establishing the respiration.

MR. A. A. M'CONNELL said that he had seen the instrument at work, and considered it as good as any he had seen. He pointed out that the expense of negative pressure cabinets had up to this almost prohibited their use. He went on to detail the variety of cases in which the instrument had been used with the greatest success. In one case of large sarcoma of the chest wall, the wall was freely resected, and the lung could be seen kept out against the chest without the slightest tendency to collapse. Frazer, of Philadelphia, uses the instrument in all his head cases. He also uses it in the cerebellar cases because in the majority of these cases there appeared to be some respiratory difficulty, and the instrument acted as the most efficient artificial respirator which could be obtained. It had been said that there was a disadvantage, inasmuch as the patient had to get a large amount of anæsthetic in order to introduce the tube into the larynx, but such was not the case, as it is not necessary to have the patient deeply under when introducing the tube. Any difficulties that were met with in this procedure he attributed to lack of practice.

DR. NESBITT said that from the point of view of the physician he considered the apparatus a step in the right direction. He suggested that it was, perhaps, a trifle cumbersome, but had no doubt that this would be overcome.

MR. H. DE L. CRAWFORD, in replying, said that he did not think that the catheter offered any impediment in tongue cases. With regard to the use of the apparatus in the Trendelenburg position, what he should have said was that Frazer used the apparatus for operations in this position as the breathing appeared to be somewhat hampered, but it was not considered that any very great advantages attached to its use in that particular situation. Referring to Dr. Kirkpatrick's question as to the recovery of patients, he pointed out that the anæsthetic is not stopped until the pressure is beginning to be compensated. He considered that the instrument would be found much more portable than those previously in use.

SECTION OF MEDICINE.

President—J. O'CARROLL, M.D., F.R.C.P.I.

Sectional Secretary—F. C. PURSER, M.D., F.R.C.P.I.

Friday, February 28, 1913.

THE PRESIDENT in the Chair.

An Unusual Nervous Case.

UNDER this designation DR. PURSER showed a patient of Dr. O'Carroll's for diagnosis. [This paper is printed in full at page 321.]

DR. FINNY said it was very hard to grasp the whole case with sufficient accuracy to be able to recognise the importance of the different phenomena presented. It seemed to be a very compound case, beginning with the motor paralysis of one muscle, partial or complete recovery from which was followed on the left side by a repetition from which the recovery was imperfect. The area of anæsthesia and analgesia were peculiar. The anæsthesia seemed to be in areas other than those supplied by the third and fourth lumbar roots. The physical deformity from which the patient suffered was not a familiar one in the absence of an accident. The small amount of loss of tone shown in the case was against the tabes dorsalis diagnosis. He also suggested that the patient had not got the typical gait of locomotor ataxy.

DR. KIRKPATRICK referred to the fact that Dr. Purser explained the weakness in his patient's legs by a lesion in his anterior nerve roots (third and fourth), and attributed his sensory phenomena to another disease altogether, but it seemed to him (Dr. Kirkpatrick) difficult to understand that he should have a lesion of his anterior nerve roots and no lesion of his posterior nerve roots. He was not in a position, however, to offer any other diagnosis, but in the absence of a specific history and of Argyll-Robertson pupil there appeared to be a great deal of difficulty in accepting the diagnosis of locomotor ataxy. As to whether any such condition of the spinal column is found similar to

Charcot's disease he could not say, but he pointed out that in Charcot's disease there was always considerable destruction of the joint, and he thought if the patient suffered from any such condition in his spinal column within recent years there would be some more evidence of it than a mere pain like lumbago. The explanation of the condition he considered very ingenious, but there seemed to him to be very much, if not more, against the acceptance of it than there was for it.

THE PRESIDENT said that the history given by Dr. Purser was very remarkable, and that, though he had seen very little of the case himself, he was anxious to be associated with it on account of its interest. He could not help thinking that there was a great deal to be said for the views expressed by Dr. Finny and Dr. Kirkpatrick—*i.e.*, that the condition is hardly to be accounted for by two separate diseases, and even for one disease arising out of the other. An easy explanation would appear to be that the man had a spinal disease, that he had neuritis of his motor nerves, and that possibly he had an ascending degeneration in the posterior column—pseudo tabes dorsalis—and that the other mischief would be sufficiently accounted for by the compression of the sensory nerves. He did not agree that all forms of sensation should be equally involved in compression. He considered that it would be safer if the history of the case was about to be re-cast to view it as a spinal lesion due to something unknown, and that, consequently, there was a motor mischief with the muscular failure, which apparently was an earlier thing, and then the sensory mischief coming afterwards.

The Cæliac Affection.

DR. DRURY read a paper on a case of "The Cæliac Affection," the title under which Gee described the condition in 1888. [This paper will be found at page 241.]

DR. FINNY said that the record of the case was of the greatest interest to him. Cæliac disease, he pointed out, was so far free from all pathological definition, but the idea that it was a catarrh of the duodenum and upper ileum seemed to be the most likely. The condition was very rare, and in his long experience he had only a record of three cases. The first case he had was the one which he men-

tioned to Dr. Drury when the latter consulted him about his case. The patient was a fine boy of from two and a half to three years old, who was said to be sweet-tempered, but this he attributed to the fact that he was taking no notice of what was going on around him. His abdomen was doughy, his motions were as large as those of an adult, and he had several of them in the day. He would sit in whatever position he was put, and never ask to be removed, and he appeared to have difficulty in moving his lower limbs, but he was in no way paralysed. Smith's method of treatment was adopted, all milk was stopped, and a meat diet substituted, and the recovery was very rapid, as it was only two or three months before the child got back to ordinary diet. Two other cases similarly treated also made satisfactory recoveries. He never met with a case in his hospital practice, and he wondered if the disease was peculiar to well-fed children.

DR. O'KELLY said he could not say he saw the disease, but he gave particulars of the case of a fellow-student which came under his notice which in some ways corresponded. He said that whenever this young man took milk he invariably had a tendency to diarrhœa; the stools became white, and there was loss of flesh. When milk was discontinued the condition disappeared.

DR. CROFTON said the case was one of much interest to him, as he had experienced cases in which the stools were white, and the treatment he adopted was to make a vaccine for the catarrh, and this generally cured it. He suggested that all cases of indigestion are due to micro-organisms, and react well to vaccine treatment. He inquired if any micro-organisms were discovered in Dr. Drury's case.

DR. CAHILL agreed with Dr. Crofton that a vaccine would have done some good.

DR. NESBITT said before coming to the meeting he had no idea of what the title of the paper, *cœliac disease*, meant. He was much interested in the clinical description given. He thought, however, that Dr. Drury might have gone further in dealing with the case. From the description it is difficult to pick up accurately the facts, but the character of the motions would lead one to suppose that the trouble was the defective digestion of the carbohydrates and fats, and treatment with pure proteid would bear out this view.

He suggested that there might have been an absence of pancreatic secretions. He thought that if any light was to be thrown on the case a very full examination of the stools was absolutely essential, and not only would fat have to be looked for, but fatty acids. He could not make any suggestion as to the cause of the absence of the secretions, but it appeared to him to be more in the nature of temporary absence of bile. He could not agree with the opinion expressed as to the probable efficacy of vaccine treatment in such a condition as this. He referred to the multiplicity of bacteria in the intestinal tract, and asked how the microbe that would cure this condition was going to be isolated.

THE PRESIDENT said he had experience of a case of a little boy aged two and a half years. He was not confined to bed, but presented a very curious picture, with a pink and white complexioned face, little thin legs supporting a huge, almost spherical body. At that age, and with a history of having been brought up on artificial food, he thought it was a case of rickets, but eventually the idea of getting a name for the condition was given up, and no information could be ascertained. The little patient was, however, put on a minced meat diet, much the same as that indicated by Dr. Finny, the meat being rubbed down and given on extremely thin toast and agreeably flavoured with current jelly. On this treatment the child got well, but the treatment had to be renewed from time to time, as he took farinaceous food. He was afterwards called on to treat the child for tape-worm. This was the second case that he had seen of tape-worm following raw meat treatment.

Friday, April 4, 1913.

THE PRESIDENT in the Chair.

Remarks on a Case of Spleno-Medullary Leukæmia.

DR. MOORHEAD reported a case of this condition occurring in a boy aged eleven, who was treated by x-rays. At the beginning of the treatment the white cells numbered 325,000 per c.mm., and the red cells 1,735,000 per c.mm., and the boy's weight was 5½ stone. After five weeks' treat-

ment, with exposure of five minutes every third day, the white cells had sunk to 19,600, the red cells had increased to 3,217,000 and the weight was 6st 4lbs. At the same time the spleen had diminished considerably in size, and the general health was much improved. The *x*-ray treatment was now unavoidably discontinued, and a month later a severe relapse was found to have taken place, the white cells having gone up to 192,000 per c.mm. Shortly afterwards symptoms of miliary tuberculosis supervened, and death occurred exactly four months after the case was first seen. In spite of the apparent immediate beneficial effect of the *x*-ray course the rapid termination of the case suggested that possibly the effects of *x*-rays were not really remedial, and that as a result of their use the resistance to tubercular infection in leukæmic cases was diminished. This suggestion is supported by the records of other leukæmic cases in which similar treatment had been employed.

PROFESSOR E. J. McWEENEY said his experience in such cases closely coincided with Dr. Moorhead's—*i.e.*, the influence of the *x*-rays in causing a diminution of the spleen and an amelioration of the symptoms. He was surprised at the diminution in the number of the white cells and in the size of the spleen in a number of cases of spleno-medullary leukæmia after *x*-ray treatment. He suggested that this would indicate that the spleen in this condition had something to do with the pouring out of the white cells into the circulation. A point that struck him was the absence of granular cells which was met with in a great many cases. Ehrlich indicated that a large number of eosinophile cells was thought to be the most marked feature in leukæmia, but he (Professor McWeeney) was struck with the difficulty of demonstrating such a feature in practice. With regard to the termination of the case by acute miliary tuberculosis, he had a similar experience in one of his cases.

DR. HAYES referred to his experience in the treatment of several cases, extending over the past six or seven years, by *x*-rays, and said that he had found that there generally came a time when *x*-ray exposure had absolutely no effect no matter how long or regularly it was continued.

DR. MOORHEAD, replying, said he was a little sceptical as to whether *x*-ray was the right treatment, and was hopeful

that he might have got some information as to some other forms of treatment.

*Iodoform and Benzoyl Chloride in Pulmonary Tuberculosis:
a Criticism.*

DR. J. B. COLEMAN read a paper criticising the treatment of pulmonary tuberculosis by iodoform and benzoyl chloride. [It will be found printed on page 325.]

DR. WALTER SMITH said that when called upon to judge of the success or otherwise of any method of treating disease there were two postulates—1, an adequate knowledge of the drugs or methods used; 2, sufficient clinical and scientific evidence of their fitness. There might be a third, but doubtful, method—viz., the method of analogy.

With regard to the clinical and scientific evidence advanced, the paper read in December last was to the effect that the evidence was not satisfactory. In order to gain the adhesion of an educated profession it would be necessary to give satisfactory evidence.

Referring to the drugs recommended, enough was known about iodoform to justify the scepticism about a half-grain dose introduced into the body of a man exercising any influence. Ample experiments had been made as to its germicidal and bacteriological qualities, and they were ascertained to be extremely feeble. A 50 per cent. solution of the drug would hardly kill even the staphylococcus. It had been proved to be harmless to tubercle, and the only bacillus to which it had been found to be deadly was that of cholera. He could not understand how benzoyl chloride—an extremely irritating compound—could be tolerated.

DR. CROFTON said there were *à priori* grounds for the use of iodoform as a germicide in pulmonary tuberculosis. He recalled a case of a girl with twenty-nine superficial tubercular lesions, all of which were healed by the use of iodoform in ether, and scraping, and that iodoform and ether acted as a germicide in this case he considered that no one could have any doubt. Owing to the extraordinary *à priori* objections to the use of intravenous injections of iodoform in ether he had tried to get something as good to be given intramuscularly, and had, therefore, tried iodoform and benzoyl chloride, and if he had not succeeded in the ad-

vanced cases referred to, he considered that he had not hurried their end, and since some cases had much improved, he held that he was therefore justified in trying the treatment.

As to the erroneous assumption that iodoform would do no good, he referred to experiments on rabbits which had been injected with the bovine bacillus, and when the disease had developed had been completely cured with iodoform in ether given intravenously. This, he considered, gave good grounds for its use in human cases. He asked if it could be shown that fresh air or sanatorium treatment had ever cured such infected rabbits. He pointed out that in his paper he had stated that in early cases tuberculin treatment would cure in a great many instances, but that more advanced cases were frequently unsuitable for tuberculin, and it was, therefore, essential to use some other method, and iodoform was the best intravital germicide he knew. He also found out the other microbes which nearly always accompanied the tubercle bacillus, and used autogenous vaccines made from these microbes. He considered that no more accurately scientific methods could be adopted.

Iodoform with the molecule intact he admitted was a weak germicide, but in the presence of pus it was split up with the liberation of free iodine, and he suggested that it acted as an inactivator of the toxin of the tubercle bacilli, just in the way it was used to inactivate the diphtheria toxin in the early stages of the immunisation of animals.

As to coughing and pneumothorax, he said that the slower the injection is given the less would be the coughing, and he had never met with pneumothorax in any of his cases, nor had he ever heard of such an accident. As to hæmorrhage, he related a case in which bleeding had rapidly ceased when treatment had commenced. The case in which Dr. Coleman had said retinal hæmorrhages had occurred was a very advanced one, and no one could assert that they were due to the iodoform. Unless Dr. Coleman could suggest something that was better than the present sanatorium treatment he would continue to use the iodoform and the other methods.

He concluded by giving a summary of twenty-nine private cases in which the treatment had been carried out. Six early cases, apparently cured; eight second stage cases,

apparently cured; fifteen advanced cases, six apparently well, two very much improved, seven died.

DR. PARSONS said that it does not take very long after the introduction of a treatment which is successful for that treatment to become general, and pointed to salvarsan as a notable instance of this recently. He referred to the fact that Dewar had in 1903 published a series of cases treated with ethereal injections of iodoform, and that, notwithstanding this, the result of inquiries made throughout sixteen of the principal sanatoriums in Great Britain elicited the fact that thirteen of these institutions had never used the treatment.

SIR JOHN MOORE discussed the dangers attending this form of treatment.

DR. T. GILLMAN MOORHEAD said that he did not think that any member should be allowed to remain under the impression that the Academy disapproved of the trial of any method of treatment unless that method was dangerous, and he did not consider this method dangerous, and he saw no objection to its trial.

A matter that should be deprecated was bringing a method of treatment before the public before the profession was satisfied that it should be brought forward.

He considered that all desired to arrive at the truth of the matter, and he, therefore, suggested that it might be well if a certain number of cases could be submitted to independent examination, and then treated and compared with some other cases which had not been treated, and that the results might then be reported to the Academy. This, he thought, would demonstrate their desire to arrive at a proper conclusion.

DR. KIRKPATRICK said that several of the cases in which the treatment was employed were under his care. The patients had been in hospital for some time under satisfactory conditions, the majority of them being treated in the open air on the balcony, where they were in as good circumstances as in a sanatorium. He could say that in no case did the treatment seem to do them any harm, nor did the patients object to the treatment.

DR. BEWLEY endorsed what Dr. Moorhead had said. He had tried the treatment, but had not yet arrived at any con-

clusions, but looked forward to bringing his results before the Academy.

THE PRESIDENT said he considered that Dr. Moorhead's suggestion would get over all the difficulties. He suggested that the profession should, as far as possible, keep clear of doing away with a healthy scepticism, as a dogmatic statement would never get them one step further.

THE WAR IN THE BALKANS.

M. DEPAGE, Chief of the Belgian Ambulance Hospital, under the Red Cross Society, at Constantinople, in a very interesting statement of their work to the Royal Academy of Medicine in Brussels, tells of the epidemic of cholera and the state of the wounded in the army of Turkey. The Ambulance Corps, with provision for the care of two hundred wounded, left Brussels on the 15th of November, 1912, and arrived at Constantinople on the 18th of the same month. M. Depage found 8,000 cholera cases being treated in the mosques of Stamboul, St. Sophia alone containing 3,000. The dead were removed at night. On one day, affirms M. Depage, 700 patients died of the epidemic. The Red Cross Ambulance went to San Stefano, where arrangements were made for transporting the cholera patients to the opposite coast of Asia. Finally the hospital was located at Tach-Kichla, and consisted of two surgical wards of seventy beds each, an operating theatre, and an observation ward. Describing the difference between the wounds inflicted by the Mannlicher rifle and shrapnel guns, he says the rifle bullets traversed the body through and through, and the wounds, which were aseptic, were not dangerous, unless the bullet wounded a large vessel or some important nerve centre. Fractures generally united without suppuration, under extension and a bandage; and perforation of the stomach, intestines and bladder, as a rule, healed spontaneously. Shrapnel bullets occasioned septic wounds, which generally suppurated and usually produced permanent injuries, their wounds closely resembling those caused by dum-dum bullets.—*Gazette des Hôpitaux*, 86-ième Année, No. 24, February 27th, 1913.

SANITARY AND METEOROLOGICAL NOTES.

VITAL STATISTICS

For four weeks ending Saturday, March 22, 1913.

IRELAND.

THE average annual death-rate represented by the deaths—exclusive of deaths of persons admitted into public institutions from without the respective districts—registered in the week ended March 22, 1913, in the Dublin Registration Area and the twenty-six principal provincial Urban Districts of Ireland was 21.7 per 1,000 of their aggregate population, which for the purposes of these returns is estimated at 1,199,180. The deaths registered in each of the four weeks of the period ending on Saturday, March 22, and during the whole of that period in certain of the districts, alphabetically arranged, correspond to the following annual rates per 1,000 :—

COUNTY BOROUGH, &c.	Week ending				Average Rate for 4 weeks
	Mar. 1	Mar. 8	Mar. 15	Mar. 22	
27 Town Districts	23.1	23.2	23.4	21.7	22.8
Dublin Reg. Area ...	26.9	23.0	23.5	21.6	23.7
Dublin City ...	28.4	24.5	25.0	22.8	25.2
Belfast ...	23.4	23.3	23.7	25.0	23.8
Cork ...	28.6	24.5	27.9	21.1	25.5
Londonderry ...	10.2	14.0	17.8	11.4	13.4
Limerick ...	16.2	19.0	19.0	20.3	18.6
Waterford ...	13.3	34.2	26.6	3.8	19.5

The deaths (excluding those of persons admitted into public institutions from without the respective districts) from certain epidemic diseases registered in the 27 districts during the week ended Saturday, March 22, 1913, were equal to an annual rate of 1.6 per 1,000. Among the 190 deaths from all causes for Belfast are 5 from measles, 2 from scarlet fever, 1 from diphtheria, and 3 from diarrhoeal diseases. Two of the 31

deaths from all causes for Cork are from measles. One of the 2 deaths for Waterford is from whooping-cough. Among the 12 deaths from all causes for Newry are 6 from measles. One death from measles is among the 3 deaths from all causes for Wexford. The 6 deaths from all causes for Sligo include 2 from enteric fever and 1 from diphtheria. One of the two deaths for Kilkenny is from enteric fever; and the 2 deaths for Bray include 1 from whooping-cough.

DUBLIN REGISTRATION AREA.

The Dublin Registration Area consists of the City of Dublin, as extended by the Dublin Corporation Act, 1900, together with the Urban Districts of Rathmines, Pembroke, Blackrock and Kingstown. The population of this area is 403,000; that of the City being 308,187, Rathmines 38,769, Pembroke 29,942, Blackrock 9,161, and Kingstown 16,941.

In the Dublin Registration Area the births registered during the week ended March 22 amounted to 218—120 boys and 98 girls—and the deaths to 178—82 males and 96 females.

DEATHS.

The registered deaths, omitting the deaths (numbering 11) of persons admitted into public institutions from localities outside the Area, represent an annual rate of mortality of 21.6 per 1,000 of the population. During the twelve weeks ending with Saturday, March 22, the death-rate averaged 22.2, and was 3.1 below the mean rate for the corresponding portions of the 10 years 1903–1912.

The total deaths registered, numbering 178, represent an annual rate of 23.0 per 1,000. The annual rate for the past twelve weeks was 23.5 per 1,000, and the average annual rate for the corresponding periods of the past ten years was 26.5 per 1,000 of the mean population for all deaths registered.

The total deaths from all causes included 3 from enteric fever, 1 from typhus, 2 from whooping-cough, 6 from influenza, and 4 of children under 2 years of age from diarrhoea and enteritis.

In each of the 3 preceding weeks, deaths from enteric fever were 2, 1, and 0; deaths from typhus were 1, 1, and 0; deaths from whooping-cough were 6, 2, and 2; deaths from influenza were 3, 3, and 8; and deaths of children under 2 years of age from diarrhoea and enteritis were 6, 3, and 5.

There were 28 deaths from tuberculous disease. This number includes 20 deaths from pulmonary tuberculosis, 2 from tuberculous meningitis, 1 from abdominal tuberculosis, 1 from tuberculosis of the vertebral column, 2 from tuberculosis of joints, 1 from tuberculosis of uterus, and 1 from disseminated tuberculosis. In each of the 3 preceding weeks deaths from tuberculous disease numbered 42, 21, and 33.

Broncho-pneumonia caused 9 deaths, lobar pneumonia 3 deaths, and pneumonia (type not distinguished) caused 6 deaths.

Organic diseases of the heart caused the deaths of 13 persons, and 28 deaths from bronchitis were recorded.

Five deaths were caused by cancer.

The deaths of 4 infants under one year of age were caused by convulsions, those of 3 infants by congenital debility, that of 1 infant by congenital malformation, and those of 5 through premature birth.

One death was caused by accidental burns.

In 3 instances the cause of death was "uncertified," there having been no medical attendant during the last illness. These cases include the deaths of 2 infants under one year of age, and the death of a person aged 74 years.

Forty-six of the persons whose deaths were registered during the week ended March 22 were under 5 years of age (35 being infants under one year, of whom 11 were under one month old), and 39 were aged 65 years and upwards, including 29 persons aged 70 and upwards. Among the latter were 19 aged 75 years and upwards, of whom 3 (females) were stated to have been aged 90, 92 and 92 years respectively.

STATE OF INFECTIOUS DISEASE IN THE DUBLIN REGISTRATION AREA AND IN BELFAST.

The usual returns of the number of cases of infectious diseases notified under the "Infectious Diseases (Notification) Act, 1889," and the "Tuberculosis Prevention (Ireland) Act, 1908," as set forth in the following table, have been furnished by Sir Charles A. Cameron, C.B., M.D., Medical Superintendent Officer of Health for the City of Dublin; by Mr. Fawcett, Executive Sanitary Officer for Rathmines and Rathgar Urban District; by Mr. Manly, Executive Sanitary Officer for Pembroke Urban District; by Mr. Heron, Executive Sanitary

Officer for Blackrock Urban District; by the Executive Sanitary Officer for Kingstown Urban District; and by Dr. Bailie, Medical Superintendent Officer of Health for the City of Belfast.

TABLE SHOWING THE NUMBER OF CASES OF INFECTIOUS DISEASES notified in the Dublin Registration Area (viz.—the City of Dublin and the Urban Districts of Rathmines and Rathgar, Pembroke, Blackrock, and Kingstown), and in the City of Belfast, during the week ended March 22, 1913, and during each of the preceding three weeks. An asterisk (*) denotes that the disease in question is not notifiable in the District.

CITIES AND URBAN DISTRICTS	Week ending	Measles	Rubella, or Epidemic Rose Rash	Scarlet Fever	Typhus	Relapsing Fever	Diphtheria	Membranous Croup	Pyrexia (origin uncertain) <i>a</i>	Enteric or Typhoid Fever	Erysipelas	Puerperal Fever	Whooping-cough	Cerebro-spinal Fever	Tuberculous Phthisis (<i>Phthisis</i>)	Acute Polio-myelitis	Total
City of Dublin	Mar. 1	•	•	6	2	—	3	—	1	4	6	1	•	—	7	—	30
	Mar. 8	•	•	10	1	—	3	—	—	5	4	—	•	—	14	—	37
	Mar. 15	•	•	8	4	—	5	—	1	5	11	—	•	—	13	—	47
	Mar. 22	•	•	7	—	—	5	—	1	8	1	—	•	—	8	—	30
Rathmines and Rathgar Urban District	Mar. 1	•	•	1	—	—	1	—	—	—	—	—	•	•	•	•	2
	Mar. 8	•	•	—	—	—	—	—	—	1	—	—	•	•	•	•	1
	Mar. 15	•	•	2	—	—	1	—	—	—	—	—	•	•	•	•	3
	Mar. 22	•	•	1	—	—	1	—	—	—	—	—	•	•	•	•	2
Pembroke Urban District	Mar. 1	—	—	—	—	—	1	—	—	—	—	—	—	•	6	•	7
	Mar. 8	—	—	—	—	—	2	—	—	—	1	—	1	•	—	•	4
	Mar. 15	—	—	3	—	—	—	—	—	—	—	—	1	•	—	•	4
	Mar. 22	1	—	—	—	—	4	—	—	—	—	—	—	•	—	•	5
Blackrock Urban District	Mar. 1	•	•	—	—	—	—	—	—	—	—	—	•	—	•	•	—
	Mar. 8	•	•	—	—	—	—	—	—	—	—	—	•	—	•	•	—
	Mar. 15	•	•	—	—	—	—	—	—	—	—	—	•	—	•	•	—
	Mar. 22	•	•	1	—	—	1	—	—	—	—	—	•	—	•	•	1
Kingstown Urban District	Mar. 1	•	•	—	—	—	—	—	—	—	1	—	•	•	—	•	1
	Mar. 8	•	•	—	—	—	—	—	—	—	1	—	•	•	2	•	3
	Mar. 15	•	•	—	—	—	—	—	—	1	—	—	•	•	—	•	1
	Mar. 22	•	•	—	—	—	—	—	—	—	—	—	•	•	2	•	2
City of Belfast	Mar. 1	•	•	23	—	—	8	—	—	1	4	1	•	•	11	•	48
	Mar. 8	•	•	12	—	—	10	—	—	6	1	—	•	•	13	•	42
	Mar. 15	•	•	23	—	—	6	—	1	2	9	—	•	•	18	•	59
	Mar. 22	•	•	18	—	—	4	—	—	2	1	—	•	•	6	•	31

a Continued Fever.

CASES OF INFECTIOUS DISEASES UNDER TREATMENT IN DUBLIN HOSPITALS.

During the week ended March 22, 1913, 3 cases of measles were admitted to hospital, 5 were discharged, and 3 cases remained under treatment at the close of the week. In the three preceding weeks such cases were 4, 6, and 5, respectively.

Ten cases of scarlet fever were admitted to hospital, 27 were discharged, and 92 cases remained under treatment at the close of the week. This number is exclusive of 20 con-

valescent patients who remained under treatment at Beneavin, Glasnevin, the Convalescent Home of Cork Street Fever Hospital, Dublin. At the close of the 3 preceding weeks the cases in hospital were 120, 113, and 109 respectively.

Twelve cases of diphtheria were admitted to hospital, 2 were discharged, and there were 2 deaths. The cases in hospital, which at the close of the 3 preceding weeks numbered 30, 34, and 25 respectively, were 33 at the close of the week.

Seven cases of enteric fever were admitted to hospital, 1 was discharged, there were 2 deaths, and 35 cases remained under treatment in hospital at the close of the week, the respective numbers in hospital at the close of the 3 preceding weeks being 30, 31, and 31.

One case of typhus was admitted to hospital during the week, there was one death, and 7 cases remained under treatment at the close of the week.

In addition to the above-named diseases, 8 cases of pneumonia were admitted to hospital, 8 were discharged, there was 1 death, and 25 cases remained under treatment at the end of the week.

ENGLAND AND SCOTLAND.

The mortality in the week ended Saturday, March 22, in 96 large English towns (including London, in which the rate was 17.2) was equal to an average annual death-rate of 16.5 per 1,000 persons living. The average rate for 16 principal towns of Scotland was 18.4 per 1,000, the rate for Glasgow being 19.5, and that for Edinburgh 17.8.

INFECTIOUS DISEASE IN EDINBURGH.

The Registrar-General has been favoured by A. Maxwell Williamson, M.D., B.Sc., Medical Officer of Health for Edinburgh, with a copy of his Return of Infectious Diseases notified during the week ended March 22. From this Report it appears that of a total of 54 cases notified, 30 were of phthisis, 14 of scarlet fever, 6 of diphtheria, 3 of erysipelas, and 1 of enteric fever. Among the 396 cases of infectious diseases in hospital at the close of the week were 133 cases of scarlet fever, 111 of phthisis, 44 of measles, 40 of whooping-cough, 30 of diphtheria, 11 of erysipelas, 7 of chicken-pox, 6 of enteric fever, and one of cerebro-spinal fever.

METEOROLOGY.

Abstract of Observations made in the City of Dublin, Lat. 53° 20' N., Long. 6° 15' W., for the Month of March, 1913.

Mean Height of Barometer, - - -	29.729 inches.
Maximal Height of Barometer (8th, at 9 p.m.),	30.468 „
Minimal Height of Barometer (19th, at 4 a.m.),	28.700 „
Mean Dry-bulb Temperature, - - -	43.0°.
Mean Wet-bulb Temperature, - - -	40.3°.
Mean Dew-point Temperature, - - -	37.1°.
Mean Elastic Force (Tension) of Aqueous Vapour,	.224 inch.
Mean Humidity, - - - - -	80.3 per cent.
Highest Temperature in Shade (on 4th), -	57.1°.
Lowest Temperature in Shade (on 18th), -	28.1°.
Lowest Temperature on Grass (Radiation) (18th)	24.3°.
Mean Amount of Cloud, - - - - -	44.7 per cent.
Rainfall (on 22 days), - - - - -	2.155 inches.
Greatest Daily Rainfall (on 2nd), - - -	.274 inch.
General Directions of Wind, - - - - -	W., S.W.

Remarks.

March, 1913, may best be described as an unsettled windy month, of medium temperature, frequent although not heavy rains, and preponderating westerly and south-westerly winds. The precipitation, which was in excess of the average, consisted of hail and sleet or snow on several of the twenty-two “rain-days.” There were fresh gales on the 5th and 19th. Sheet lightning was seen on the nights of the 15th and 20th. The sky was often remarkably free from cloud—the estimated percentage of cloud was 51.6 at 9 a.m. and on 37.7 at 9 p.m.—the mean being 44.7.

The general distribution of atmospheric pressure did not differ much from that of the earlier months of the year. But at times the Atlantic depressions travelled in a more easterly direction than previously, and also passed nearer the British Islands. The most serious depression of the month was that of the 4th and 5th. Its centre crossed Iceland from W.S.W. to E.N.E. At 7 a.m. of the 4th, the barometer read 27.84 inches at Reykjavik and 27.87 inches at Vestmanna; at 6 p.m. Seydesfjord reported 27.79 inches—at a time, be it observed, when pressure

was as high as 30.50 inches in the Azores and 30.40 inches over Central France and Spain. On the 19th also the barometer fell to 28.36 inches at Castlebay, Barra Island, off the west coast of Scotland, in a depression which caused violent gales over the British Isles and afterwards in Denmark also.

In Dublin the arithmetical mean temperature (43.8°) was 0.1° above the average (43.7°). The mean dry-bulb readings at 9 a.m. and 9 p.m. were 43.0° . In the forty-nine years ending with 1913, March was coldest in 1867 and 1883 (M.T. = 39.0°), and warmest in 1903 (M.T. = 48.1°). In 1912 the M.T. was 46.3° .

The mean height of the barometer was 29.729 inches, or 0.187 inch below the corrected average value for March—namely, 29.916 inches. The mercury rose to 30.468 inches at 9 p.m. of the 8th and fell to 28.700 inches at 4 a.m. of the 19th. The observed range of atmospheric pressure was, therefore, 1.768 inches.

The mean temperature deduced from daily readings of the dry-bulb thermometer at 9 a.m. and 9 p.m. was 43.0° . Using the formula, *Mean Temp.* = *Min.* + (*Max.* — *Min.*) $\times .485$, the M.T. becomes 43.6° . The arithmetical mean of the maximal and minimal readings was 43.8° , compared with a thirty-five years' (1871–1905) average of 43.7° . The mean maximum was 49.6° ; the mean minimum, 38.0° . On the 4th the thermometer in the screen rose to 57.1° —wind, S.W.; on the 18th it fell to 28.1° —wind, calm. The minimum on the grass was 24.3° , also on the 18th.

The rainfall was 2.155 inches, distributed over 22 days. The average rainfall for March in the thirty-five years, 1871–1905, inclusive, was 1.910 inches, and the average number of rain-days was 17. The rainfall, therefore, and also the rain-days were above the average. In 1867 the rainfall in March was very large—4.972 inches on 22 days. On the other hand, the smallest March rainfall was .288 inch on 8 days in 1893. In 1912 the rainfall was 2.727 inches on 24 days.

High winds were noted on 14 days, but reached the force of a fresh gale only on the 5th and 19th. A solar halo appeared on the 13th, 18th and 29th. There was a lunar corona on the night of the 19th. Hail fell on the 7th, 14th, 19th, 20th, 21st and 23rd; sleet or snow on the 7th, 15th, 16th and 17th. The lowest daily maximum temperature was

42.5° on the 16th. The highest daily minimum was 44.4° on the 1st.

The rainfall in Dublin during the three months ending March 31st amounted to 8.333 inches on 55 days, compared with 3.292 inches on 44 days in 1911, 8.799 inches on 61 days in 1912, and a thirty-five years' (1871-1905 inclusive) average of 6.130 inches on 50.0 days.

At the Normal Climatological Station in Trinity College, Dublin, the Observer, Mr. C. D. Clark, reports that the mean temperature was 43.4°, the mean dry-bulb reading at 9 a.m. and 9 p.m. being 43.8°. The screened thermometers rose to 58° on the 4th, and fell to 26° on the 18th. The grass minimum was 15° on the 18th. The mean daily maximum was 50.2°, and the mean daily minimum, 36.5°. Rain fell on 20 days to the amount of 2.14 inches, .29 inch being measured on the 2nd. There were 133.7 hours of bright sunshine, of which 8.7 hours occurred on the 30th. The mean temperature of the soil at 9 a.m. at a depth of one foot was 43.2°; at a depth of 4 feet it was 44.6°.

Captain Edward Taylor, D.L., returns the rainfall at Ardgillan, Balbriggan, Co. Dublin, as 1.98 inches on 21 days. This amount was 0.09 inch below the average, but the rain-days were 4 in excess. The largest measurement in 24 hours was .35 inch on the 2nd. Up to March 31st, the rainfall at Ardgillan amounted to 7.76 inches, or 1.35 inches above the average, and the rain-days were 53, or 3 in excess of the average number for the first quarter of the year. The thermometers in the screen rose to 55.2° on the 4th and fell to 27.6° on the 18th.

Mr. T. Bateman returns the rainfall at The Green, Malahide, Co. Dublin, as 1.92 inches on 21 days. The greatest rainfall in 24 hours was .295 inch on the 1st. The extremes of temperature in the shade were—highest, 55°, on the 30th; lowest, 23.5°, on the 17th. The mean temperature was 40.0°. Showers of snow fell on the 7th, 14th and 15th.

Miss C. Violet Kirkpatrick measured 3.38 inches of rain on 23 days at Cheeverstown Convalescent Home for Little Children, Clondalkin, Co. Dublin. The largest amount recorded in 24 hours was .49 inch on the 2nd.

Dr. C. Joynt, F.R.C.P.I., returns the rainfall at 21 Leeson Park, Dublin, as 2.001 inches on 21 days, .260 inch being measured on the 28th.

Dr. Arthur S. Goff reports that at Belfort House, Dundrum, Co. Dublin, rain fell on 19 days to the amount of 2.43 inches, compared with an average of 2.64 inches on 20 days in the 10 years ended with 1910. The greatest daily rainfall was .49 inch on the 27th. The temperature in the shade ranged from 56° on the 4th to 27° on the 18th. The mean shade temperature was 43.8° compared with a ten years' (1901-1910) average of 43.7°, and with 42.2° in 1911, and 45.9° in 1912. Snow showers fell on the 7th, 14th and 15th.

At Manor Mill Lodge, Dundrum, Co. Dublin, Mr. George B. Edmondson recorded a rainfall of 2.52 inches on 24 days, the maximum in 24 hours being .47 inch on the 28th. The mean temperature of the month was 42.7°, the extremes being—highest, 56° on the 4th; lowest, 28° on the 18th.

At the Ordnance Survey Office, Phoenix Park, Dublin, rain fell on 21 days to the total amount of 2.475 inches, the largest measurement being .480 inch on the 2nd. The duration of bright sunshine was 125.7 hours, of which 9.8 hours occurred on the 30th.

At Marino, Killiney, Co. Dublin, Mr. W. McCabe, the observer for the Right Hon. L. A. Waldron, registered 1.53 inches of rain on only 13 days, the greatest fall in 24 hours being .30 inch on the 6th.

Dr. A. J. Blake, Resident Medical Superintendent of the Sanatorium of the Dublin Joint Hospital Board, at Crooksling, Brittas, Co. Dublin, reports a rainfall in March of 3.06 inches on 23 days, the heaviest fall in 24 hours being .63 inch on the 2nd.

Dr. J. H. Armstrong reports that at Coolagad, Greystones, Co. Wicklow, 2.86 inches of rain fell on 21 days. The maximal fall in 24 hours was .45 inch on the 6th. Snow and sleet fell on the 7th; snow on the 15th and 16th; and hail on the 14th.

At Auburn, Greystones, Co. Wicklow, Mrs. Sydney O'Sullivan recorded a rainfall of 2.72 inches on 23 days, the maximum in 24 hours being .40 inch on the 6th.

Dr. Charles D. Hanan, M.D., Resident Medical Officer, reports that the rainfall at the Royal National Hospital for Ireland for Consumption, Newcastle, Co. Wicklow, was 2.73

inches on 21 days, the maximal fall in 24 hours being .42 inch on the 6th. The mean air temperature was 42.9° —the extremes being—highest, 55° on the 6th and 30th; lowest, 32° on the 15th, 16th and 18th. The mean maximum was 48.3° ; the mean minimum, 37.5° .

The Rev. Arthur Wilson, M.A., writing from Dunmanway Rectory, Co. Cork, states that 7.22 inches of rain fell there on 26 days, 1.00 inch being measured on the 1st, .93 inch on the 2nd, and .74 inch on the 18th. The rainfall was 1.82 inches over the average for March, and was the heaviest in this month since 1905, when 10.25 inches fell in March. There were several very fine, bright days with warm sunshine, especially St. Patrick's Day and Monday and Tuesday in Easter week. sharp frost occurred on the night following Easter Day, the 23rd. Hail showers were frequent, and thunder and lightning occurred on the evening of the 15th and in the night of the 30th. There was snow on the 16th. The rainfall of the first quarter of 1913 at Dunmanway equals 23.67 inches—an amount which is 7.71 inches over the average.

THE USE OF HORMONES IN THERAPEUTICS.

THE number of *The Prescriber* for April is the largest single issue of that monthly journal which has as yet been published. It is devoted to a method of treatment which is at present attracting much professional attention—namely, the use of hormones. As is now well known, these are chemical substances secreted by an organ in the body which, when carried by the blood-stream to another associated organ, excite in it a functional activity—that is, “activate” it. Nowhere else has so much recent information on the application of these internal secretions, or “hormones,” been gathered together; and the April number of *The Prescriber* is virtually a monograph on the subject—the result of months of the most painstaking work. The price of the issue is one shilling, its postage being twopence extra. It may be obtained at the Editorial Office of the Journal, 137 George Street, Edinburgh, or through any medical bookseller.

PERISCOPE.

ROYAL COLLEGE OF SURGEONS IN IRELAND : BARKER ANATOMICAL PRIZE FOR 1913.

A prize of £21 is offered for competition, and is open to any student whose name is on the anatomical class list of any school in the United Kingdom. The preparations entered must be placed in charge of the Curator on or before the 31st of May, 1913. The prize is offered for a Dissection showing the Anatomical Relationships of the Prostate and the Visceral Pelvic Fascia. Conditions under which the competition is to be carried out :—(1) The preparations must be sent to Professor Arthur H. White, the Curator of the Museum, Royal College of Surgeons in Ireland, each being marked with a fictitious signature, and accompanied by a sealed envelope bearing outside the same signature, and containing within—(a) the full name of the competitor, and (b) a declaration to the effect that the work of the preparation has been carried out by himself. The printed form necessary for this declaration can be obtained on application to the Curator. (2) The dissections are to be mounted in vessels fitted with glass covers, but the covers must not be sealed down. Earthenware basins and plaster of Paris settings are not compulsory if the specimens can be equally well displayed and preserved by other means. (3) No prize will be awarded unless sufficient merit be shown, 70 per cent. of the total marks being the minimum. The following is the scale of marks :—(a) For the merit of dissection, 60 ; (b) for excellence of setting, 20 ; (c) for originality, 20. Total, 100. The dissections for which prizes are awarded become the property of the College. (4) Those competitors who enter dissections for which prizes are not awarded, but which show sufficient merit, may be refunded such amount of the cost of production as the examiners deem fit. (5) The cost and risks of transport must be borne by the student. The College will not be responsible for any damage the preparations may sustain ; but those of unsuccessful competitors residing at a distance will be carefully re-packed and handed to the carriers for delivery at such address as may be specified by the student.

A RECENT EPIDEMIC OF MEASLES AT ROTUMA.

At the meeting of the Section of Epidemiology of the Royal Society of Medicine, on February 28, Dr. Hamer in the chair, Mr. Glanvill Corney, I.S.O., gave a very interesting account of a severe epidemic of measles in an island near the Fiji group, Rotuma, in 1911. The area of the island is only fourteen square miles, and the inhabitants number 1,973. During the period of leave of the medical officer to the island, on January 29, 1911, a steamer, which unfortunately had a case of measles on board, called at the island. Communication took place, and measles became implanted among the people, for the first time in the knowledge of the generation now living, though the late paramount chief remembered that when he was a boy measles ran through the whole island. From the report of the recent outbreak furnished by the present Commissioner, Dr. Hugh MacDonald, it appears that while this epidemic was raging the deaths numbered 489. Death was most busy among young children and among adults of 20 to 25 years of age. Over 45 years the incidence was comparatively slight. Measles accounted for 326 victims, and it was mostly complicated with ileo-colitis, probably of bacillary origin; in some with tubercular disease of lungs, and in a few with yaws, pneumonia, pregnancy, childbirth, miscarriage; while pulmonary tuberculosis accounted for 26 deaths. About three months after the epidemic commenced influenza appeared and persisted in the island for about a month, and when that ceased mumps prevailed. The death-rate was probably much increased by the habit of the patients of standing in the streams to get cool when they felt the fever upon them.—*The Hospital*, March 8, 1913.

[This outbreak, with its high rate of mortality, affords one more illustration of the fact that measles assumes an unaccustomed virulence when introduced into a "virgin soil"—that is to say, a population not protected by an antecedent visitation of the disease within many years. In connection with the statement that "over 45 years the incidence was comparatively slight," it is interesting to call to mind the facts relating to a previous epidemic of measles which occurred in Fiji 37 years ago. That visitation probably conferred an immunity on persons now aged 45 years and upwards. In 1875 the Fiji Islands, in the Pacific Ocean, were annexed to the

British Crown. From the *Medical Times and Gazette* of June 12 in that year, we learn that "the first advantage (?) derived by annexation"—so the Fiji papers of March 20, 1875, describe it—"is the introduction of measles, and for this the islanders are indebted to H.M.S. 'Dido,' which came down and discharged her diseased passengers, utterly regardless of any consequences that might ensue." The disease made great ravages throughout the whole of the islands. Tui Levuka and other chiefs succumbed to it, and even the hardy mountaineers in the interior had considerable havoc made in their ranks. The germs of the disorder were taken into the mountains by the chiefs who had been brought over to Levuka—the capital—and entertained on board the "Dido." The disease, which was almost always followed by dysentery (morbillous colitis), assumed the form of a plague.—J. W. M.]

ROYAL COLLEGE OF SURGEONS IN IRELAND.

At a meeting of the Council held on Thursday, April 3, 1913, Mr. R. Dancer Purefoy, President, in the chair, Mr. J. S. Pegum, F.R.C.S.I., was elected Senior Assistant to the Professor of Anatomy, and Mr. P. D. Sullivan, F.R.C.S.I., was elected Second Assistant to the Professor of Anatomy.

TUBERCULINS (NOTES ON THEIR PREPARATION AND USE).

UNDER the above title a brief epitome of present day practice with reference to the tuberculins has recently been issued by the Wellcome Physiological Research Laboratories, Herne Hill, London. The very copious discussion which has circled round the methods of treatment initiated by Koch in 1890 at every phase of their development has accumulated in almost overwhelming mass, and requires, more than most departments of medical study, the discerning hand of the sifter. The natural complexity of the subject has been intensified by the somewhat awkward nomenclature which has grown up to describe the series of substances of tubercular origin which have been employed, both for treatment and diagnosis. In this little book the various preparations are clearly defined and concisely described. The standardisation of tuberculins by Koch's method and by complement deviation is described in some detail. The method of preparing new tuberculin (W) is detailed, and it is pointed out that the dose of this preparation is stated in milligrams of bacterial substance actually

present in the finished product, 2 mgm. of new tuberculin (W) corresponding to 1 cc. of new tuberculin T.R. prepared from 10 mgm. of bacilli. The various methods suggested for the employment of tuberculin as a diagnostic agent, subcutaneous, cutaneous, percutaneous and ophthalmic, are described. This part of the subject is illustrated by coloured drawings. Calmette's ophthalmic reaction is illustrated, the colouring of the eye in a well-marked reaction of moderate severity being shown with remarkable accuracy. Tuberculin as a therapeutic agent, the opsonic index, and the method of posology known as the intensive system are the subjects of brief, but illuminating paragraphs. A handy list of indications and contra-indications for tuberculin, such as a practitioner may desire to keep by him as a refresher to the memory, and a list of tuberculins available, complete this useful work.

LITERARY INTELLIGENCE.

AMONGST their spring publications Messrs. J. & A. Churchill, London, are about to issue :—" Liquid Air Oxygen Nitrogen." By Mr. Georges Claude, Engineer Laureate of the Institute of France. Translated from the French by Mr. H. E. P. Cottrell. Considerable attention is being devoted to nitrogen owing to its demand by agriculturalists. The work contains 150 illustrations. " The Examination of Waters and Water Supplies." Second Edition. By Dr. J. C. Thresh, Medical Officer of Health for the County of Essex. The new edition has been amplified and many new illustrations have been added to bring it up to present day standard. " A Laboratory Text-Book of Chemistry." Part I. By Mr. V. S. Bryant, Assistant Master at Wellington College. For schools and colleges.

NEW PREPARATIONS AND SCIENTIFIC INVENTIONS.

Dry Peptonoids, Soluble (Carnrick & Co., Ltd.).

THIS new concentrated nutrient takes the place of the old Beef Peptonoids (Powder), and is a great advance on the latter. It is in the form of a light, brown, dry powder, packed in glass bottles, priced at 3s. Like the Beef Peptonoids it is prepared by physiological processes from beef, milk and wheat. It gave on analysis the following results :—Moisture, 5.6 ; diffusible proteids (proteoses and peptones), 39.5 ; other nitrogenous constituents, 1.1 ; diffusible carbo-hydrates (maltose, &c.), 46.7 ; fat, .3 ; insoluble matter, 1.0 ; mineral constituents,

5.8—Total, 100.0. The above results show it to be practically soluble in all fluid media, and to consist mainly of diffusible bodies free from stimulating properties and purin derivatives. A favourable consideration is the distinct palatability of the preparation either dry or in solution. In all conditions requiring nutritive reinforcement without stimulation or digestive effort Dry Peptonoids may be used with the greatest success—for example, in acute infectious diseases : typhoid, pneumonia, wasting diseases, carcinoma, tuberculosis, gastric or intestinal ulceration, &c. In convalescence it will give good results as a supplement to the ordinary diet for rapid tissue building, and with normal saline it forms an excellent colonic aliment. The Dry Peptonoids may be used either dry, or in the form of a paste, or dissolved in a liquid medium.

“ Enule ” Glycerin Rectal Suppositories.

THIS preparation is now issued by Messrs. Burroughs Wellcome & Co. in a new packing. The outermost covering is a neat circular aluminised metal case. The line of juncture between the lid and the case is surrounded by a strip of aluminised paper which effectually shuts out the moisture of the air. This strip can be removed instantly by pulling the end of the string which is pasted underneath it. On opening the tin the next line of defence is seen—a bottle with a polished metal cap. The metal cap is fitted on the inside with a special cork composition, and the top of the bottle, instead of presenting a broken unequal edge, is perfectly smooth and all on one plane. Consequently a good twist of the screw secures the complete sealing of the contents. Each “ Enule ” product is wrapped in a special tin-foil case of unique design, which not only protects the product from damage but is of great convenience in handling. The product can be held between the fingers by its sheath without being affected by the warmth of the hand, and at the moment desired the tinfoil can be stripped off without the least difficulty. It is difficult to conceive of any more complete and thoroughgoing precautions for the preservation of a preparation naturally so susceptible to atmospheric influence as a glycerin suppository. “ Enule ” glycerin contains 95 per cent. of anhydrous glycerin. Its shape precludes the possibility of accidental expulsion. Two sizes are issued—adults’ and children’s—in containers of one dozen.

In Memoriam.

SIR HENRY ROSBOROUGH SWANZY, M.A., M.D.,

DOCTOR OF SCIENCE ;

FELLOW AND PAST PRESIDENT, ROYAL COLLEGE OF
SURGEONS IN IRELAND.

THE Medical Profession has lost a representative and a brilliant member by the lamented and almost sudden death of HENRY ROSBOROUGH SWANZY on the evening of Saturday, April 12, 1913. Up to the previous Tuesday SIR HENRY SWANZY had been in the full swing of his ever-busy professional life. On that day he was struck down by an attack of influenza. For two or three days he seemed to be progressing favourably ; on the night of Friday symptoms of heart-collapse appeared, and he was dead in a few hours. Many of his friends learned for the first time of his illness when they read the announcement of his death in the newspapers on Monday, April 14th.

At the time of his death, SIR HENRY was in his seventieth year, having been born in 1843. He was the eldest son of John Swanzy, of Wellington Road, Dublin, and grandson of Henry Swanzy, of Rockfield, or Avelreagh, Co. Monaghan. He married Mary Knox, eldest daughter of the late Dr. John Denham, a former Master of the Rotunda Hospital, Dublin, and by her he had three daughters. His wife, who pre-deceased him by some years, was a granddaughter of Major F. A. S. Knox, of the Royal Artillery.

HENRY SWANZY received his medical education in the School of Physic in Ireland, Trinity College, Dublin, and in the Schools of Surgery of the Royal College of Surgeons in Ireland. He graduated in the University of Dublin as B.A. in 1864 and as M.B. the following year. To the M.A. degree he proceeded in 1873, and his Alma Mater conferred on him the degree of M.D. *honoris causâ* in 1905. Three years later, in 1908, the honorary degree of D.Sc. was conferred upon him by the University of Sheffield on the occasion of the visit to that City of the British Medical Association. He received the " Letters Testimonial " of the Royal College of Surgeons in Ireland in 1866, obtaining

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the Fellowship in 1873 on his return from the Continent, after years of both study and adventure. During the Austro-Prussian War of 1866 he served as surgeon in the Prussian Army and was present at the decisive battle of Koeniggratz in Bohemia on July 3rd of that year. His studies SWANZY pursued at Berlin and Vienna. In the former city he attached himself to the clinique of Professor von Graefe, whose assistant he afterwards became, thus laying the foundation of his future fame as oculist.

Shortly after his return to Ireland, SWANZY joined the staff of the National Eye and Ear Infirmary, Dublin, and many years of successful practice followed. This institution, originally founded in 1844 and incorporated in 1897, was finally amalgamated with St. Mark's Ophthalmic Hospital, Lincoln Place, Dublin. In 1904 the combined hospitals, under the title of the Royal Victoria Eye and Ear Hospital, entered upon a most promising career in new and splendid buildings situated in extensive grounds at Adelaide Road, Dublin. This amalgamation was largely due to SWANZY's foresight, influence, and untiring exertions. As Senior Surgeon, he worked with unflagging zeal in the wards; but he also and with like energy devoted himself to forward the material interests of what is now a great institution, nearing its structural completion by the building of its western wing. For many years the subject of this memoir acted as Ophthalmic Surgeon to the Adelaide Hospital, Dublin. He was also Honorary Oculist to the National Institution and Molyneux Asylum for the Female Blind of Ireland.

In 1888 SWANZY delivered the Bowman Lectures before the Ophthalmological Society of the United Kingdom, choosing for his subject the value of eye symptoms in the localisation of cerebral disease. This was the first of a long series of honours which fell to his lot. Mention has already been made of his University distinctions. From 1906 to 1908 he was President of the Royal College of Surgeons in Ireland, receiving the honour of Knighthood at the hands of King Edward VII. during his tenure of that high office. In 1907 he was chosen President of the Ophthalmological Society—occupying the Chair for two years. And, to crown all, in 1911 he was selected to act

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as President of the Ophthalmological Section of the International Congress of Medicine, which is to take place in London next August. Alas that he should not have lived to enjoy the fruition of that high honour!

In the field of literature SWANZY was not less distinguished than in the domain of ophthalmic and aural surgery. His well-known "Handbook of Diseases of the Eye and their Treatment" ran through ten editions in a comparatively short time. The tenth edition was published in 1912, and for the first time contained coloured figures to the number of twenty-one. These were reproduced from original paintings by Mr. Louis Werner, who has been long and honourably associated with SIR HENRY in the authorship of the later editions of the book.

In addition to this classical work SIR HENRY SWANZY'S writings included "Recollections of the Medical School of Berlin," published in 1871 in the *British Medical Journal*. To the "Reports of the Ophthalmological Society" he contributed articles on "Retinal Hæmorrhages, with Detachment of the Vitreous Humour" (1882), "A Case of Hemiachromatopsia" (1883), "A Case of Congenital Conjugate Deviation of the Eyes" (1888), and "The Combined Method of Extraction for Cataract" (1893). He was the author of the article "Eye Diseases and Eye Symptoms in their relation to Organic Diseases of the Brain and Spinal Cord" in the *System of Diseases of the Eye*, by British and Foreign Authors, published in 1900 in London and Philadelphia.

SWANZY played a very active part in medical and scientific life in Dublin. For many years he sat on the Council of the Royal College of Surgeons in Ireland, and of it he was one of the most energetic members. To his efforts the formation in this city of a flourishing branch of the Research Defence Society was in great measure due. In 1912, lastly, he devoted much time and work to the preparations for celebrating the bicentenary of the "School of Physic in Ireland," as the Medical School of Trinity College, Dublin, is styled in technical language. He was one of the honorary treasurers of the fund now being raised to establish a memorial of that most successful and historic celebration.

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This is not the place to enlarge upon the social side of SWANZY'S life. A certain reserve and a coldness of manner were sometimes misunderstood by those who did not know him well. His intimate friends recognised the true character of the man. One of them, Sir Anderson Critchett, Bart., of London, wrote:—"A fraternal friendship had existed between SIR HENRY SWANZY and myself for nearly forty years, and I cannot yet realise to the full the extent of the heavy loss which I have sustained." "It was impossible," he added, "to know SWANZY without loving him."

Perhaps the best summary of his character is that given by the writer of an appreciating memoir in *The Lancet* for April 19th, 1913, in the following words:—"SWANZY'S personal character was as rare as his scientific attainments. Intelligence, quickness of perception, judgment, struck even the casual observer. But to those who knew him the prevailing characteristic was his single-mindedness. Whatever his object was—the treatment of a patient, the success of his hospital, the prosperity of the College of which he was a Fellow—he devoted himself to it without permitting anything to turn him aside. He was sometimes impatient of stupidity, and always of anything approaching dishonesty, and his tongue was sharp when roused. But he bore no rancour, and he was always ready with generous excuses for the failings of others. His keen humour brightened many a dull debate."

One thing is certain—SWANZY'S kindness to poor patients was proverbial and unbounded. How much he felt for them and their infirmity may be gathered from the motto he chose from Goethe for the Annual Reports of the Royal Victoria Eye and Ear Infirmary—

"Sterben ist nichts—aber leben und nicht sehen,
Das ist gar ein Unglück."

And so we bid our friend "Farewell" in words written indeed long ago, but never more aptly applied and fitting—

"'Gainst death and all-oblivious enmity
Shall you pace forth; your praise shall still find room,
Even in the eyes of all posterity
That wear this world out to the ending doom."

J. W. M.

THE DUBLIN JOURNAL

OF

MEDICAL SCIENCE.

JUNE 2, 1913.

PART I.

ORIGINAL COMMUNICATIONS

ART. XVI.—*The Treatment of Hæmoptysis.*^a By JAMES LITTLE, M.D. Edin. and Dublin; one of the Physicians to the King in Ireland; Regius Professor of Physic, University of Dublin.

THE object of this short communication is to ascertain the opinion of the members of the Club regarding the few drugs which are still thought worthy of consideration when we are called on to treat a patient with severe hæmoptysis.

When blood is brought up it is generally easy to distinguish between hæmoptysis and hæmatemesis; sometimes it is difficult. When I was a student at the University of Edinburgh, George Wilson, the Professor of Technology, lay ill. He was bringing up blood, and there was a difference of opinion as to whether the blood came from the respiratory organs or from the stomach. One morning when his physician entered his room the professor said, "I have been writing my epitaph":—

"Here lies George Wilson o'ertaken by Nemesis,
He died not of Hæmoptysis but of Hæmatemesis."

^a Read before the Dublin Biological Club, Tuesday, May 13, 1913.

The dark colour of the blood, the absence of any admixture with air, the presence of particles of food, its expulsion by the act of vomiting instead of by the act of coughing, and the feeling of fulness in the stomach instead of oppression in the chest, all indicate that the blood comes from the stomach, and, as a rule, we are not left in doubt as to whether we are dealing with a hæmoptysis or a hæmatemesis.

If we are satisfied that it is the former we have to consider what is the pathological change which causes the hæmorrhage. We find the sputum intimately mixed with blood in the viscid unaërated spit of genuine pneumonia. We see it bright-coloured and frothy in the rapidly fatal pneumonia which sometimes accompanies influenza; occasionally streaks of blood appear coming from the bronchial tubes in bronchitis, with violent cough, but, as a rule, we may conclude when the spit is mixed with streaks or small gouts of blood that we are dealing either with tubercular disease, congestion of a portion of the lung due to mitral valve disease, or more rarely with an infarct which has originated in some phlebitis or septic change in a distant organ. In most of these cases I think we may say that the hæmoptysis need not be a special object of treatment, probably it relieves the congestion, and is not harmful but beneficial to the patient.

Very different, however, are the cases to which I wish to draw attention. In these the physician is summoned to a patient who is spitting up large quantities of almost pure blood. Omitting cases of aneurysm of the aorta or of the innominate artery, which, as a rule, are immediately fatal, these are cases of phthisis, and the escape of blood is due to the rupture of an artery in the wall of a cavity. These cases sometimes occur early in phthisis, or at all events when the patient has not long been aware that he suffered from this disease. Many years ago a gardener, said to be only a few weeks ill, and who did not look seriously ill, was admitted to the Adelaide Hospital. The morning

after his admission I went to his bedside, but before I had asked him a question or made any examination he suddenly brought up blood in such quantity as to fill his trachea and suffocate him. After death we found a cavity the size of a walnut, through which ran an artery which had burst.

Such a result of hæmoptysis is, however, rare; the blood is not poured out in sufficient quantity to extinguish life, and the physician has the opportunity of doing something; and the object of this communication is to elicit an expression of opinion as to what he should do. I am old enough to remember when it was considered advisable, unless the patient was actually in advanced phthisis, to bleed him. If this was thought too heroic, leeches were applied, or he was dry-cupped, and on many occasions when I was a pupil at the Armagh County Infirmary I carried out this treatment. It was advocated both by Cheyne and Stokes, and even in the fourth edition of Walsh's magnificent work on "Diseases of the Lungs" general bleeding is advised. He had faith also in acetate of lead with acetic acid and laudanum. Of direct astringents, however, he considered gallic acid the most reliable, but he gave it in doses of twenty or thirty grains every half-hour.

My kind friend, that really skilful physician of the old school, who, in my student days, was Professor of Materia Medica in the School of Physic—Jonathan Osborne—always gave ipecacuanha in nauseating doses in hæmoptysis, and it is one of the few drugs employed fifty years ago which is still recommended by acknowledged authorities. Dr. (now Sir Robert) Philip, Physician to the Royal Infirmary in Edinburgh, and also to the Royal Victoria Hospital for Consumption, says:—"Small doses of mercury are of excellent service, and may be exhibited along with ipecacuanha and opium as in the following formula which the writer strongly recommends:—

Pulveris ipecacuanhæ compositi, gr. 4.

Hydrargyri cum cretâ, gr. 1, every two to four hours."

In those days—now fifty years ago—acetate of lead with

laudanum and a considerable quantity of acetic acid, and the sucking of ice, if it could be obtained, were the means on which most reliance was placed. Some, however, had faith in turpentine, which they gave by the mouth and by the rectum, and applied to the surface of the chest, hoping not only that it would act as a counter-irritant, but that it would reach the lung by inhalation.

With the exception of ipecacuanha I hardly think that any of these remedies of former days still possess the confidence of the profession. But I now wish to allude to those of a more recent period on which an expression of opinion from the members would be valuable, as they are still employed, whether wisely or not.

The hypodermic *injection of ergotine* was originally suggested by Dr. Balfour in the *Edinburgh Medical Journal* for July, 1870, and was for several years regarded as the proper remedy to use in large pulmonary bleeding. It was advised on theoretical grounds. It was assumed that as it controlled bleeding from the uterine vessels it would have a similar effect on other blood-vessels, and I am surprised to find it recommended in very recent works—not so much for hæmoptysis as for hæmatemesis.

It was very soon condemned, likewise on theoretical grounds. It was said if we admit that ergotine contracts the blood-vessels through the body it will only render the pressure on the torn vessel all the greater. The best authorities, I think, condemn it.

I do not know who deserves the credit of advising the employment of *hypodermic injections of morphine* or morphine and atropine in profuse hæmoptysis, but I used it thirty years ago. At that time, one day a commercial traveller was stepping into the train for Cork when he suddenly brought up a large quantity of blood. He asked to be brought to the Adelaide Hospital, and I was sent for. He was coughing incessantly and bringing up blood in large quantity. I gave him a hypodermic of morphine, which at once stopped the cough. For the next week, whenever he began to awake from the morphine and to

cough, we gave him a cup of milk and another hypodermic,^a and ultimately he got well, and continued his journey.

The next drug suggested for the arrest not only of bleeding from the lung but from other organs was *chloride of calcium*. In the spring of 1893 a gentleman, who had been a patient of mine, returned from Australia, where he had sustained a cerebral hæmorrhage. When he reached London he telegraphed to me asking whom he should consult, and I suggested Sir William Gowers. A few days afterwards I had a letter from Sir William, telling me that in three or four weeks I should see in the *British Medical Journal* a paper, written by Dr. Almroth Wright, on the power of chloride of calcium in favouring coagulation of the blood, and he suggested that if my patient had another hæmorrhage I should administer chloride of calcium. Soon after I was asked to go to the school at Castleknock to see, with the doctor of the school, a boy who was bringing up blood in quantity, and I suggested that, along with other treatment, the patient should get chloride of calcium. The hæmorrhage soon ceased, and I have since, with varying confidence, used the drug, but I have never been convinced of its value. It has, however, the important support of Sir R. W. Philip and of Dr. Lawson, the physician to the Nordrach-on-Dee Sanatorium, and the author of the article on "Hæmoptysis" in the *System of Treatment*, lately edited by Latham and English. Dr. Lawson says:—"It has been our practice for years, and the practice has been invariably attended by success, to give calcium lactate (30 grains) in a little water at the onset of hæmoptysis, and to repeat the dose in an hour,

^a The hypodermic solution which I have employed for many years consists of—

Morphinæ sulphot.	gr.	8.
Liq. atropinæ sulph.	℥	xxiii.
Aq. camph.	ad.	℥i.

Ten minims of this contains—

Morphinæ sulph.	gr.	$\frac{1}{8}$.
Atropinæ sulph.	gr.	$\frac{1}{200}$.

And if one finds it necessary to double the dose it does not contain so much atropine as to dry the mouth unpleasantly. I always have a fragment of camphor put in the bottle, which keeps the solution clear.

keeping up the treatment by giving the syrup of calcium chloride in one-drachm doses in a little water every four hours up to forty-eight hours."

Quite recently an altogether new departure has been made by the introduction of the vaso-dilators into the treatment of hæmoptysis, in the hope that by permitting an easy flow of blood in all the arteries of the body the pressure on the injured vessel would be lessened. Sir R. W. Philip advises the inhalation of nitrite of amyl in large hæmorrhages and nitrite of sodium in frequent small doses by the mouth in presence of sustained high pressure on the arterial system, and tincture of aconite, one minim, every hour under similar circumstances.

Still more recently Dr. Lawson has recommended gelatin. He regards it as the most potent remedy in severe hæmorrhages from the lung. He injects two drachms, obtained in one of Martindale's tubes, and mixed with an equal quantity of warm water, either just above or just below Poupart's ligament. Though I obtained two of these tubes for a case, to which I will allude in a few minutes, I did not use the gelatin, and, therefore, can give no opinion on its power.

Quite recently Dr. Gunn has brought under my notice another novelty, of which, for this purpose, the books at my disposal do not give any information. Some weeks ago he was kind enough to open the abdomen of a woman in the Adelaide Hospital for obscure abdominal symptoms. When she was nearly well after the abdominal operation I was asked to see her on account of severe hæmoptysis. I had seen her many times both before and after the operation, and, strange to say, although I had noticed that her fingers were clubbed, I had not examined her chest, as she had never complained of cough or any pulmonary distress. When called to her on account of the bleeding I laid my stethoscope gently over the right front, and heard cavernous breath sounds. I gave her ten minims of the hypodermic solution which I have already mentioned, and thought I had done all I could, when Dr. Gunn happened to come in, and proposed that we should inject *horse*

serum, of which, for this purpose, I had never heard. It was used only once, but the morphine was continued as required for many days. I believe the horse serum helped to stop the bleeding, but there appear to be various limitations to its use, and I am indebted to Dr. Gunn for a note on the subject.^a

There are two remedies to which—though old ones—I wish to allude—the sucking of ice and the application of a blister over the part of the chest from which we believe the blood comes.

Many years ago, when going round the Hôtel Dieu, in Paris, I heard one of the physicians inveighing against the use of ice in hæmoptysis. He said the ice only lowered the tone of the blood-vessels, and prevented their contraction. I have not for many years employed it, as it seemed to me to increase thirst, and thus lead to the patient drinking water, and so increasing the volume and lessening the coagulability of the blood.

The other remedy I have not often seen used, but in which the late Dr. Harley, who was known to several members of this Club, had great faith, is a blister. He suffered himself from some chronic lung disease, which gave rise to rather frequent and severe attacks of hæmoptysis. He said the trouble was in the left front, and when blood appeared in his sputum he at once applied a good-sized blister, and he said always with benefit. For myself, my confidence lies in the hypodermic injection of morphine and atropine, perfect quiet and more particularly on the avoidance of any physical examination beyond laying the chest piece of a binaural stethoscope on the chest and hearing what can be heard without permitting the patient to cough or draw a deep breath, on very spare diet, and on the gentle opening of the bowels.

^a The intra-muscular injection of 5 to 15 cc.'s of horse serum has apparently been one of the causes that has led to success in numerous cases of surgical hæmorrhage. In this case, as in all cases of hæmorrhage, the difficulty of estimating the value of treatment is great, but I think that here, as in some other cases, good was done; in any case, if care is taken not to repeat the serum injection at a longer interval than ten days, no harm will be done.—L. G. GUNN.

ART. XVII.—*Sir Henry Rosborough Swanzy, M.D., Honoris Causâ, Univ. Dubl.; D.Sc., Honoris Causâ, Sheffield; Fellow and Past-President, Royal College of Surgeons in Ireland.* By CHARLES E. FITZGERALD, M.D., M.Ch. Univ. Dubl.; President, Royal College of Physicians of Ireland.

As one who was possibly brought into closer relations with the late Sir Henry R. Swanzy than any other member of the medical profession in Dublin during the early part of his career, I cannot refrain from recording my sense of the great loss we have all experienced by his sudden death.

He and I were fellow students, but he took the degree of M.B. at the University of Dublin some three years before I did, and the following year he became a Licentiate of the Royal College of Surgeons in Ireland, after which he went to Germany, where he acted as surgeon in the Prussian Army campaign of 1866. After that he joined the Ophthalmic Clinique of the late Prof. von Graefe, and eventually was appointed one of the assistants at his Private Ophthalmic Hospital. Before returning to Dublin he was in communication with the authorities of the House of Industry Hospitals, with a view to his appointment as Ophthalmic Surgeon to that institution, but the negotiations fell through. Shortly after he returned the late Dr. J. G. Hildige, then one of the most prominent oculists in Dublin, died rather suddenly, and Swanzy was appointed to the post he had occupied as Surgeon to the National Eye and Ear Hospital and General Dispensary. This hospital had been founded in the year 1814, and was consequently the oldest ophthalmic hospital in Ireland. It and St. Mark's Hospital, which had been founded by the late Sir William Wilde, were the only special ophthalmic and aural hospitals in Dublin. In 1814 a Mr. Ryall, who had formerly held a medical appointment in the Royal Navy, was mainly instrumental

in forming the institution, and when he subsequently left Dublin it was carried on by Surgeon Morrison. In 1829 it was moved from the north side of the city to Cuffe Street—at that time a fashionable locality—where it seems to have flourished, doing much good work, until the year 1848, when, probably for want of necessary support, impossible to obtain in those times, it languished, although it did not altogether close its doors, and on Surgeon Morrison's death Dr. Hildige was appointed surgeon. Some years previous to this it had been thought advisable to incorporate with it a General Dispensary for Diseases of Women and Children, and at the time of Swanzy's appointment this department was under the care of the late Dr. Rutherford Kirkpatrick, who was then Examiner in Midwifery in the Royal College of Surgeons, and later on became Professor of Midwifery in the Medical School of the University of Dublin.

Very shortly after Swanzy had taken up work at the hospital he asked me if I would care to come and help him at it—an act of kindly friendship I can never forget. I gladly accepted his offer, for at the time I held no hospital appointment. Swanzy also occupied the post of Ophthalmic Surgeon to the Adelaide Hospital. The Eye and Ear Department of the Hospital was at a very low ebb owing to neglect consequent upon the ill health from which Dr. Hildige had suffered for some time previous to his death. It was, however, one of Swanzy's strongest characteristics that anything he undertook he carried through, even in the face of difficulties that would have daunted most men. We were both young, and, throwing ourselves with vigour into the work, we soon had the satisfaction of seeing a marked increase in the number of patients seeking relief at the hospital. As time went on it became obvious that a move into some more commodious and prominent position was essential, and accordingly a house was procured on the south side of St. Stephen's Green, and a committee of some influential persons was formed to take over the management of

the hospital. Referring to the report of that year (1873) we find the following :—" Upon its formation the committee declared themselves unwilling to act, except upon the condition of all private ownership being resigned into their hands—a measure in which Dr. Kirkpatrick and Mr. Swanzy entirely concurred. The committee, however, considered it right to indemnify these gentlemen in the amount at which their respective shares had been valued between themselves. A special subscription list was, therefore, opened, as it was not thought admissible to apply any of the general fund of the institution to that purpose." This change was effectually carried out, and the work at the hospital increased to such an extent that larger premises had to be sought for, and in the year 1881 it was installed in Molesworth Street, with an admirably planned extern department, built separately from the hospital proper. About the same time—on the appointment of Dr. Kirkpatrick to the Professorship of Midwifery at the University—the Dispensary for the Diseases of Women and Children was abolished, and the hospital became a purely special one. In 1876, Swanzy was appointed Ophthalmic Surgeon to Steevens's Hospital and Lecturer on Ophthalmic Surgery at Steevens's Hospital School of Medicine, but in 1880 he was back at the Adelaide Hospital, and was also appointed Professor of Ophthalmic and Aural Surgery at the Royal College of Surgeons. He retained his post at the Adelaide Hospital till his death. In 1890 the question of the amalgamation of the National Eye and Ear Infirmary with St. Mark's Ophthalmic Hospital—a subject which had been mooted for some time previously—took a practical form, and meetings were held between the committees of the two hospitals with a view to the carrying out of the scheme, but the difficulties to be overcome were enormous, and the magnitude of the task can only be fully appreciated by one who, like myself, was associated with Swanzy in forwarding the movement. In time, however, the obstacles were surmounted, the amalgamation was effected, and, after a further delay of a few years, the

spacious building on Adelaide Road was opened under the title of The Royal Victoria Eye and Ear Hospital. Not long before this event took place I resigned my post as Surgeon to the Hospital after twenty-five years happy and harmonious work with the best of colleagues.

I have dwelt thus fully on the history of the rise and progress of the hospital because I look upon it as the most important episode in Swanzy's life, affording, as it does, a convincing proof of that indomitable perseverance and whole-heartedness which marked all his undertakings. When he put his hand to the plough there was no looking back, and one felt secure that his thoughtfulness, thoroughness, and masterly grasp of details would be certain to bring whatever project he took in hand to a successful issue. It will, I think, be admitted on all hands that but for his untiring energy, his "unhasting yet un-resting" zeal, and his wonderful administrative abilities, this amalgamation would not have been accomplished, nor would our city now possess what is probably the most perfect model of what an ophthalmic hospital ought to be. In any case, as the Royal Victoria Eye and Ear Hospital now stands, though the entire design is not yet complete, we have, in my opinion, the worthiest and most enduring memorial of one whose life-work was largely devoted to its development, progress, and perfection.

When it comes to the question of Swanzy's position in the special branch he practised, it is almost needless for me to speak. The reputation he quickly acquired from the start of his professional career, his selection as Bowman Lecturer, and his subsequent election as President of the Ophthalmological Society of the United Kingdom, the bestowal of the honorary degree of M.D. by his own University, the similar honour of D.Sc. by the University of Sheffield, and his knighthood, are sufficient proofs of the high estimation in which his scientific attainments were held. But a higher honour still was added to these when he was elected President of the Ophthalmic Section of the International Congress of Medicine which is to be held in

London next August, for this was the recognition by the members of his own profession throughout the world, that he occupied a place in the foremost rank of the ophthalmologists of his day. With his customary forethought and painstaking assiduity, he had been devoting his best energies to making the Section a success when the hand of Death intervened and cut short his labours, leaving us all to mourn his loss.

His contributions to Ophthalmic literature are valuable, and are all marked by careful accuracy, abundant research, and lucidity of style. Especially notable are the Bowman Lecture "On the value of Eye Symptoms in the Localisation of Cerebral Disease," and a "Handbook of the Diseases of the Eye and their Treatment." The first-named is an admirable *résumé* of the work which up to that time (1888) had been accomplished in a subject which teems with difficulties. It is clearly dealt with, and exhibits a considerable amount of critical acumen. The Handbook has run through no less than ten editions—a sufficient proof of its excellence—but with that characteristic endeavour of always striving to make his work perfect, Swanzy had enlisted the valuable services of Dr. Louis Werner to collaborate with him in the later editions, with the result that it is probably now the most suitable and up-to-date text-book both for the student and for the practitioner.

Swanzy was a zealous guardian of the honour of our profession, and was a stalwart upholder of its best and noblest traditions.

Of his social qualities I can claim to speak with some authority, for it would be inconceivable that I should not have formed some definite opinion upon them after such a close intimacy, extending over a period of so many years. Joined to a natural reserve of manner there was a certain nervous self-consciousness against which it struck me he was always fighting, and which in later years he had succeeded in keeping under marvellous control. These two factors led to a most erroneous impression, shared by

many people, that he was cold, indifferent, and unsympathetic. There never was, in my opinion, a more mistaken idea, for behind all this exterior lay a warm heart, an affectionate nature, and, above all, a tender conscience. I admit these traits were veiled by an apparent stoicism, but I emphatically assert they were there, and all the more real because they lay deep and were revealed to few. Added to all this he had a keen sense of humour, and with an originality all his own he was a quaint and amusing raconteur.

Had he faults? Of course he had, nor would he have been human had he been free from them ; but—

Frail creatures are we all! To be the best
Is but the fewest faults to have :—
Look thou then to thyself, and leave the rest
To God, thy conscience, and the grave.

Such is my estimate of one whose friendship I enjoyed, whose memory I honour, and whose loss I deeply deplore.

ART. XVIII.—*Intratracheal Insufflation of Ether.*^a By
H. DE L. CRAWFORD, M.B., F.R.C.S.I. ; Assistant Surgeon, Richmond, Whitworth and Hardwicke Hospitals, Dublin. (Illustrated.)

IN the year 1909 Meltzer and Auer, of New York, first described a new method of anæsthesia which they had adopted in their experimental work on dogs. They called it “ respiration by the continuous intratracheal insufflation of air.”

A small tube was passed through the larynx into the trachea almost to the bifurcation, and by means of a foot bellows etherised air was blown down this tube, with the result that the lungs were aërated and the animal was kept anæsthetised independently of the respiratory movements. It was found that the anæsthetic mortality, which had been high, was now reduced to nothing.

On account of the positive pressure thus produced in the

^a Read before the Section of Surgery in the Royal Academy of Medicine in Ireland on Friday, March 28, 1913.

lungs many intrathoracic operations were performed on dogs with perfect success, both by the originators and also by Carrel and Elsberg.

These showed conclusively that the method was a very efficient one for intrathoracic operations, and, therefore, Elsberg, of New York, decided to try it in similar operations on the human being. His work had been so successful that this method is now recognised and widely practised in America.

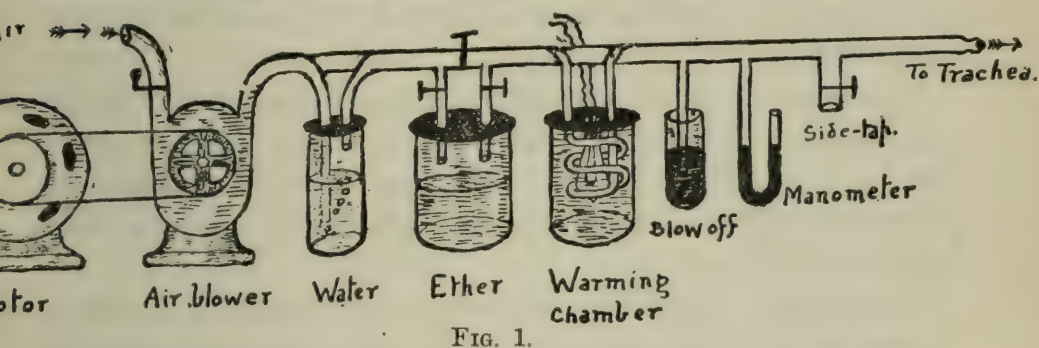
The following is the present-day technique:—The patient is deeply anæsthetised in the usual manner, the mouth is opened by a gag, the tongue pulled forward, and the operator's left forefinger passed over the tip of the epiglottis. Using this as a guide, a Cotton's laryngeal introducer armed with a catheter is passed to the laryngeal orifice and the catheter fed through it until the tip is 26 cms. from the incisor teeth. The introducer is then withdrawn, the catheter fixed by a small forceps to the upper lip, and the delivery tube of the apparatus attached. Some prefer to use Jackson's direct vision laryngoscope for this intubation, but Cotton's instrument, on account of its simplicity, is, I consider, much better.

As it is important that the air should be allowed sufficient room to return through the glottis outside the catheter, the diameter of the latter should not be greater than half the antero-posterior length of the glottis. The catheter should be of fairly stiff material, preferably silk-woven, to avoid kinking, and the usual size required is 24 French. The tip of the catheter should be well within the trachea, and yet above the bifurcation—conditions which are fulfilled in the adult by introducing it 26 cms. from the incisor teeth.

My apparatus, which is modelled on that of Elsberg, with a few modifications of my own, consists essentially of an air-blower driven by an electric motor, a water filter, an ether chamber, and a warming chamber. The air-blower is rotated at a speed of 500 revolutions per minute, and delivers a continuous stream of air. This air is filtered from dust and oil by being bubbled through water, and is

then etherised to the required extent by being passed through a two-way T piece, one tube of which passes to the ether chamber, the other straight to the warming chamber. The air can thus be delivered to the patient either pure or saturated with ether vapour. It is not bubbled through the ether, but is passed over the surface in much the same way as in a "surface carburetter."

Following this the air runs through a copper coil immersed in hot water. I have used an inverted electric lamp to keep the water at an even temperature throughout the operation, and have found it to work admirably.



Before the delivery tube leaves the apparatus, a side tube dipping into mercury is led off to act as an automatic "blow off" in case the pressure within the trachea should at any time become too great. This device is absolutely essential for safety, and is not employed in the Elsberg apparatus, although insisted on by Cotton and others.

Next, the tube is connected to a mercury manometer, on which are registered the pressure of the air and also the fluctuations due to the patient's respiration. Finally, a large side tap is inserted, which, when opened, allows the lungs to collapse fully:

In practice the pressure in the trachea should be from 10 to 15 mm. of mercury, unless it is necessary to expand the lungs fully, in which case it may be raised safely for a short time to 30 mms.

In my apparatus before intubation, the pressure registered by the manometer due to the resistance of the delivery tube and the catheter, and during the passage of a

sufficient stream of air, is 20 mms. After introduction and using the same amount of air the pressure is 30 mms. The difference, 10 mms., is obviously due to the narrowness of the trachea and is the only force distending the lungs, so that the margin of safety is ample. Further, for ordinary cases the safety valve is arranged to blow off when the pressure in the trachea becomes greater than 20 mm., so that all danger of over-distension of the lungs is avoided.

It is usual to control the air supply by checking the speed of the electric motor with a resistance to the circuit, but I have found it more convenient to use a tap on the air inlet to the air pump. Once regulated this needs no further attention.

The side tap is opened once a minute to allow the lungs to collapse. This manœuvre facilitates the gaseous interchanges and prevents the heart's action from being embarrassed by the slight but continuous pressure on the great mediastinal veins.

Once the operation is begun the patient is kept anæsthetised by controlling the taps. Usually enough ether is being given when half the air is passing over the surface of the ether and half is going through direct.

There is nothing unusual necessary in the preparation of the patient. In the case of alcoholics and very robust people a preliminary injection of morphine and atropine is desirable. During anæsthesia the pupil reactions are the same as with inhalation methods.

Cyanosis with coughing after intubation rapidly disappears under the influence of the ether, unless the catheter is not sufficiently far down the trachea. This cause is, of course, easily removed.

Apnœa occurs only if the patient is very deeply anæsthetised, or if the pressure is too great. It should not be allowed to develop, the more so as the lung movements aid in the diffusion between the alveolar air and that in the trachea and bronchi, whereby the aëration of the blood is maintained.

Although primarily intended only as a substitute for positive and negative cabinets in thoracic work, intra-

tracheal anæsthesia has been used in a variety of conditions other than the above with marked success.

The following are its chief advantages :—

(1) Even and sufficient oxygenation is obtained with no possibility of obstruction of the upper air passages.

(2) Owing to the return current of air around the catheter, blood, mucus, or vomitus cannot enter the larynx. This fact is of especial value in operations on the mouth and nose, as it insures safety and permits the surgeon to work uninterruptedly.

(3) Positive pressure can be obtained to any desired degree when one or both pleural cavities are opened by design or accident during operation, thus eliminating the danger of pneumothorax.

In several cases the apparatus has been used in intrathoracic operations and has been found to work perfectly, so that it will probably supplant both negative and positive pressure cabinets.

(4) In operations on the head and neck, the anæsthetist is out of the way, while in goître cases the trachea cannot collapse and the breathing is, therefore, uninterrupted.

Frazier, of Philadelphia, always uses it in spine and head cases, and also when it is expedient to put the patient into Trendelenburg's position, with the back uppermost.

(5) The quietness of anæsthesia, and the small and regular administration of ether make for diminished shock.

(6) It is uncommon for operations under this method of giving ether to be followed by vomiting. This is probably due to the fact that all the excess of anæsthetic is automatically blown out by the air current. Also it is possible by blowing in pure air alone at the end of the operation for a few minutes to arouse the patient rapidly from his unconsciousness.

The safety of the method is assured if a blow-off automatic valve is used, and if the air is passed over the surface of the ether and not bubbled through it.

A couple of years ago a fatality occurred due to liquid ether being sucked into the patient's lungs.

Similarly during the use of a machine which had no

safety valve the pressure rose suddenly for some reason, and severe emphysema and pneumothorax developed with a fatal result. However, with the apparatus now employed such accidents are impossible.

The after-effects appear to be uniformly good. I cannot find any mention of pneumonia or bronchitis following this method. Laryngitis with hoarseness does not occur, though a few cases of pharyngitis due to bruising of the pharyngeal wall with the intubation apparatus have been reported.

My personal experience of the method is limited to four cases.

The first case I attempted to intubate was one of sarcoma of the upper jaw. I failed to pass the tube owing to its being too soft. In all the cases since then the tube has been inserted without very much difficulty.

The first of these was a thyroidectomy. The anæsthesia lasted 30 minutes and was uneventful.

The next two cases were for excision of glands of the neck, and lasted 30 and 60 minutes respectively.

The fourth also was a gland case, a very robust individual, and I did not succeed in keeping him under the influence of the anæsthetic, so that it was necessary to supplement it by the ordinary inhalation of ether. This was due, I believe, to the fact that the catheter was not introduced far enough down the trachea.

In a similar case again, I would obviate this by first passing the tube until it is obstructed at the bifurcation and then withdrawing it one inch.

Although my experience has been so limited, yet it bears out what has been claimed for the method elsewhere, and I have no doubt that this way of administering ether has its definite field of usefulness.

In conclusion, I have to express my thanks to Mr. Kelly, of Liverpool, for his courtesy in demonstrating his apparatus to me and to the senior staff of the Richmond Hospital for kindly allowing me to anaesthetise some of their cases by this method.

PLATE XIX.

MR. H. DE L. CRAWFORD on "Intratracheal Insufflation of Ether."

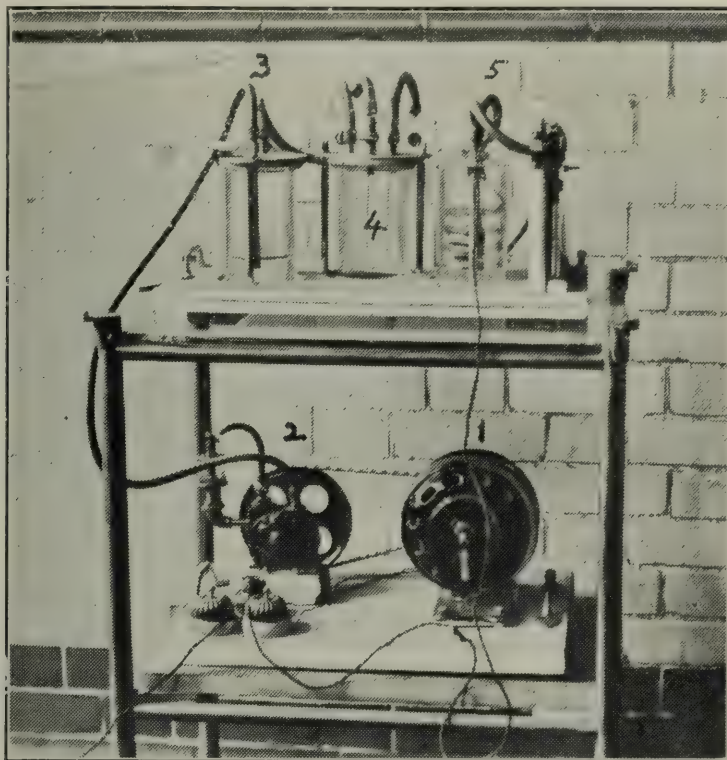


FIG. 2.—1, Motor ; 2, Air blower ; 3, Water ; 4, Ether ; 5, Warming chamber.

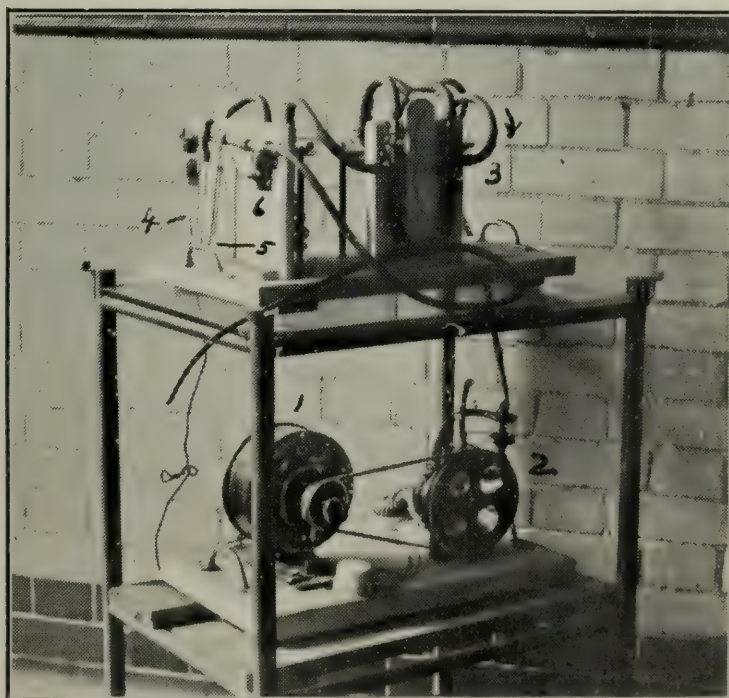


FIG. 3.—1 and 2 as in Fig. 2 ; 3, Three-way tap ; 4, Blow off ; 5, Manometer ; 6, Side-tap to allow lungs to collapse.

ART. XIX.—*Two Unusual Cases of Enteric Fever.*^a By SIR JOHN MOORE, M.A., M.D., M.Ch., D.P.H., Dubl.; D.Sc. (*Honoris Causâ*), Oxon.; F.R.C.P.I.; one of the Hon. Physicians-in-Ordinary to H. M. the King in Ireland; Senior Physician to the Meath Hospital and County Dublin Infirmity; Professor of Practice of Medicine in the Schools of Surgery, Royal College of Surgeons in Ireland. (Illustrated.)

IN the autumn of last year it fell to my lot to treat in private practice two cases of enteric fever, which presented somewhat unusual features, and accordingly are worthy of being recorded.

CASE I.—*Enteric Fever with Relapses, followed by an Attack of Catarrhal Jaundice.*

On the morning of Thursday, August 29th, 1912, the following letter, from my prospective patient's wife, reached me by post from London:—"Would you try and come up to-morrow to see Mr. A. B. He has not been at all well for the last ten days, and, as he has a great wish to be at home, we cross to-day (Wednesday). I shall keep him in bed till you see him, and hope the journey will not do him any harm."

CASE I.—The patient, a barrister, fifty-seven years of age, had enjoyed good health, with the exception of an occasional "bilious attack," until his present illness. His wife and he had been travelling in Italy during a summer holiday. While visiting Milan early in August, both of them had been bitten by mosquitos or gnats. The bites caused his wife very little trouble, but in his own case had developed into angry sores on his ankles. When these appeared, he became subject to chills, and was feverish. On his homeward journey he grew worse, and hence his anxiety to reach home with all speed.

At my first visit, early in the forenoon of Thursday, August 29th, I found the patient in bed, with a pulse of 60, temperature 100.8°, and a thickly-coated tongue. He was

^a Read before the Section of Medicine in the Royal Academy of Medicine in Ireland on Friday, May 16, 1913.

rejoiced to be safe at home, and made little complaint of illness beyond loss of appetite and flatulence. He told me that he had never had a headache in his life. There were no rose-spots, the area of splenic dulness was not increased, but his abdomen was a good deal distended by tympanites. The urine was examined next day—it was high-coloured, very turbid from urates, strongly acid in reaction. Its specific gravity was 1027. A considerable quantity of albumen was present. Under the microscope, amorphous urates formed the chief object. There were, besides, mucus, epithelium, *débris*, and vibrios.

Believing that the patient was suffering from an intestinal toxæmia, such as sometimes follows a Continental trip, I put him on salicylate of quinine together with a mixture containing liquor bismuthi et ammonii citratis. To these remedies small doses of calomel were added next day, and Contrexèville Water was taken as a beverage. A further prescription, on August 31st, was an excellent nurse.

In this first fever the highest point reached by the thermometer was 103.6° on the evening of Sunday, September 1st, which was presumably the fifteenth day of the attack. After a recrudescence to 102.9° at the evening observation on September 5th, the fever-movement gradually subsided (lysis) to September 12th, when both morning and evening observations were normal. Throughout this period of defervescence, there was a decided tendency to constipation. Enemata were employed to combat this symptom, and a mixture of liquid extract of cascara sagrada, tincture of nux vomica, and glycerine was exhibited. Fermentacetyl tablets also seemed to do good by controlling intestinal flatulence. Hardly had the temperature fallen when it began to rise slowly again, with evening exacerbations and morning remissions. The bowels also became looser, large fæcal evacuations taking place twice or thrice daily for four or five days.

On the evening of the eighth day of this second fever (September 20th) the thermometer rose to 104.4° under the tongue. About this time the blood was tested for the Widal reaction, which was positive. The spleen was only slightly enlarged, and the presence of rose-spots was open to doubt. The urine on the tenth day was highly albuminous. A pseudo-crisis occurred on the evening of the fifteenth day—

next day the temperature rose from 100.1° in the morning to 102.1° in the evening. After that, defervescence took place by lysis and was complete on the twenty-fourth day. To overcome constipation in the later stages of this second fever small (one-drachm) doses of castor oil with glycerine were given at intervals as required, and with good effect.

An apyrexial period now set in (on October 6th), and lasted for eighteen days. The patient was allowed up, and finally went out for a drive when the weather permitted. But he never regained his colour, and a hæmic systolic murmur bore witness to a serious blood-lesion.

On the evening of October 24th the temperature began to rise once more. Three days later 103.8° was reached in the evening, and for the third time the patient passed through a continued fever of considerable intensity. The bowels were obstinate in this third attack. The spleen was now considerably enlarged, the liver also was enlarged, though to a less extent. On October 28th the urine was of normal colour, clear, acid in reaction. Its specific gravity was 1017, and it contained a trace of albumen. Under the microscope little else was seen than vast numbers of micro-organisms in active motion.

On October 30th, a differential blood-count was made by my clinical clerk, Mr. Robert P. Weldon, in the Pathological Laboratory of the Meath Hospital, with the following result:—Hæmoglobin, 76 per cent.; red cells, 5,250,000 per cubic millimetre; colour index, .725; leucocytes, 36,250 per c.mm. Differential count: Polymorphs, 13.2 per cent.; small lymphocytes, 30.1 per cent.; large lymphocytes, 46.3 per cent.; eosinophils, 2.8 per cent.

The result of the blood examination and the patient's appearance and condition at this time alarmed me. I feared the possible onset of a leukæmia, such as had killed my patient's younger son many years before. On November 2nd Dr. James Craig saw the patient in consultation with me. He looked upon the case as one of toxæmia from intestinal absorption, and advised that the bowels should be freed by larger doses of castor oil, a tonic mixture of arsenic and nux vomica to be continued, as it was agreeing with the patient, as well as 5-grain doses of urotropine, which he had been taking well diluted.

On November 5th the urine was of normal colour, clear

when passed, and acid. Its specific gravity had risen to 1026. A moderate quantity of albumen was present. On standing, it deposited amorphous urates in large amount: also an excess of epithelium. On November 13th and December 2nd the specific gravity was 1016, and there was no trace of albumen.

The third fever spent itself in fourteen days. Observations on the temperature were continued night and morning until December, when they were discontinued as being unnecessary, convalescence appearing to be fully established.

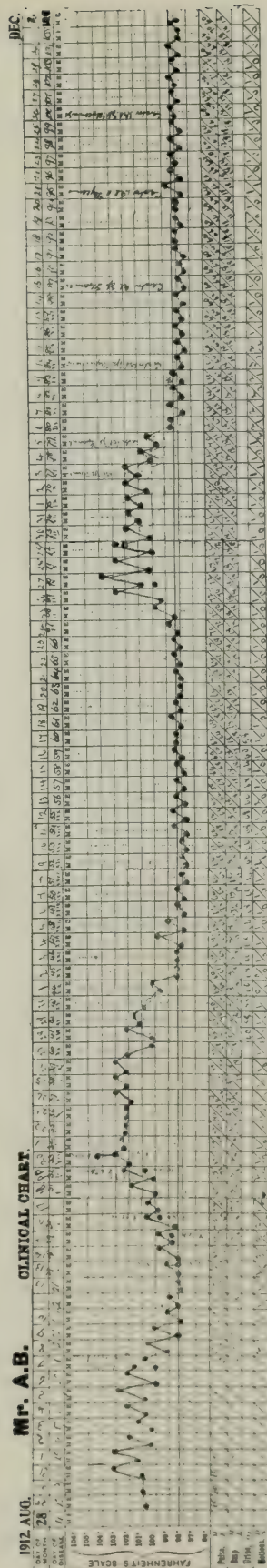
Appended is the temperature chart of this long-drawn out illness. For it I am indebted to the very skilful nurse who took charge of the patient from the 31st of August onwards.

Mr. A. B. remained well from the completion of deferescence on November 6th until the close of December. About that time, on a cold, windy afternoon, he incautiously drove on the top of a tramcar. A "chill" followed, and a tendency to diarrhœa. In the course of Friday, January 3rd, 1913, Mr. A. B. felt "seedy," and had a shivering fit. His temperature marked 100° in the mouth that evening, but next morning it had risen to 102°. I was sent for in hot haste by his wife, her letter stating that "that dreadful fever had come back." At 12 30 p.m. I found him with a temperature of 102.6°; pulse 92 (his normal pulse-rate being 60). His tongue was thickly coated, the breath was heavy. The conjunctivæ and skin were already yellow. The urine was high-coloured, and contained bile-pigment, and a motion from the bowels, passed in the morning and kept for me to see, was clay-coloured. He was flatulent and tender on pressure in the epigastrium. It was quite evident that he had an attack of gastro-duodenal catarrh, with obstructive jaundice. Having arrived at this conclusion as to the nature of his illness, I was happily able to reassure my patient's wife by giving a favourable prognosis. With rest in bed, an equable temperature, and suitable treatment, the attack soon subsided—the urine cleared, and bile reappeared in the motions, which were unusually copious.

On February 4th Mr. A. B. reported himself in my con-

PLATE XX.

SIR JOHN MOORE on "Anomalous and Relapsing Enteric Fever."



sulting-room as feeling quite well, and so I found him. On February 15th he sailed with his wife from Liverpool for the Canary Islands.

This case furnishes an example of true relapse in enteric fever. It is also interesting in view of the absence of any serious intestinal symptoms—a state of things accounted for by the patient's age (fifty-seven years); the presence of a decided leucocytosis in the third febrile attack; and the occurrence of catarrhal jaundice as a sequel. Bearing in mind the liability of the gall-bladder to become infected by the *Bacillus typhosus*, and the part which enteric fever plays in the production of gall-stones, I kept the bowels free with frequent doses of castor oil, and prescribed benzoate of sodium in full doses. He also took daily 15 grains of urotropine well diluted for some time.

CASE II.—*Enteric Fever with Epistaxis and Intestinal Hæmorrhage. Protracted course. Convalescence complicated by "Typhoid Spine."*

CASE II.—Mr. C. D., aged thirty-eight years, a solicitor by profession, had enjoyed uninterrupted good health for many years until Saturday, August 17th, 1912, when he felt very unwell. He lived practically in Dublin, but had been staying at Kingstown for a summer holiday up till the Monday before his illness began—namely, August 12th. I saw him for the first time on Monday, August 19th. He was very feverish—the tongue was coated, breath heavy, some enlargement of the spleen. The bowels were moved after 2 grains of calomel, and a couple of 3-grain doses of phenazone with tincture of gelsemium made him feel comfortable. On the morning of August 20th (fourth day), pulse 80, respirations 16, temperature 102.7°. August 21st, pulse 84, respirations 20, temperature 103.8°. On the evening of the 21st the temperature rose to 104.0°. Next morning there was a brisk epistaxis. The patient progressed favourably, except for sleeplessness, until September 7th (twenty-second day), when the night nurse reported the presence of blood-clots in a motion. This I verified by inspection.

On the morning of the 9th (twenty-fourth day) sudden

retention of urine occurred. At 12 30 p.m. I passed a catheter and drew off 42 ounces of healthy urine. On the 12th (twenty-seventh day) there was abundant intestinal hæmorrhage, and late on the night of the 14th (twenty-ninth day) I was called to see the patient because of a renewed and profuse hæmorrhage, following which the temperature fell 7 or 8 degrees to 97.8° F. There was a copious perspiration. The bleeding was controlled by lactate of calcium administered in 5-grain doses at frequent intervals for a short time. On the afternoon of Sunday, September 15th (thirtieth day) Dr. Alfred Parsons saw the patient in consultation with me. The spleen was not palpable at this time. He approved the treatment and made several valuable suggestions, to which effect was given at once. On Tuesday, September 17th (thirty-second day) the pulse was 88 and the temperature was only 99.2°. The enlargement of the spleen had subsided after the attacks of hæmorrhage. There had been no motion from the bowels from the previous Saturday (three days).

Dr. Parsons again saw the patient with me on September 26th, when he took the following note :—

“26th September 1912.—Patient looking much better. Rolls about in bed quite easily and seems decidedly stronger. Temperature 103° last night, pulse 96. Tongue clean. Motion semi-formed (contains a little undigested curd of milk). Thorax normal. Abdomen not distended. Spleen considerably enlarged, easily palpable, and on deep inspiration lower edge of liver also palpable. Knee-jerks were present; legs greatly emaciated. Suggested a return to liquid diet, though I was impressed with improvement under solid food.”

A tedious and uneventful convalescence now set in, and it was not until the fourth week in October that Mr. C. D. was strong enough to leave town for Kingstown “for change of air.” He had not been many days in his new quarters when he began to suffer from pains in his back and lower limbs. Believing them to be of rheumatic origin, he tried “to walk them off,” but without success. On Monday, November 11th, he consulted me for a severe pain in the left groin. His pulse was 82, and his weight was only

9 st. 3 lbs.—a very light weight for his height, which was 5 feet 11 inches. On the 20th (Wednesday) he again called to see me. He was quite crippled as he walked into the consulting-room, and complained of pain in the left hip, which he said had been nagging at him since October 29th or thereabouts. His tongue was slightly coated, and his pulse had risen to 108, whereas the temperature was only 97.6°. Behind and somewhat above the left great trochanter was a globular swelling, which on palpation gave a sense of fluctuation. I felt convinced that a large “cold abscess” existed, and I asked for surgical advice. The patient consented, and my colleague, Mr. William Taylor, very kindly responded to a call by telephone without a moment’s delay. He corroborated my opinion, and arranged for the admission of Mr. C. D. to Portobello Private Hospital the same evening with a view to immediate operation.

On cutting down on the tumour next morning (November 21st) it disappeared, and only a few drops of blood were drawn off by aspiration. It is not easy to decide what was the nature of this phantom tumour. Possibly the wasted, flaccid gluteal muscles formed a bag or sac which simulated a tumour.

When he returned home after a few days, Mr. C. D. suffered much from pain in his lower limbs and across the small of the back—at first on the left side, afterwards on the right. On December 2nd I found his temperature normal, his pulse-rate 80. The knee-jerks were exaggerated, but there was no ankle-clonus. The legs were much wasted, and their muscular action was feeble. The patient complained much of pain in his hips. It was with extreme difficulty that he could get out of bed owing to the most extraordinary vital ankylosis affecting his spine—especially in its lower reaches. His back was literally as stiff as a poker, and the left erector spinæ muscle in particular formed a rigid mass. On December 14th the following measurements of the calves of the legs were taken seven inches below the patellæ:—right, 11½ inches; left, 10½ inches. On that day the pulse-rate was 72, the axillary temperature 97.2°.

On December 19th Dr. Parsons saw the patient in consultation with me. To him I am indebted for the follow-

ing note, based on his very thorough and painstaking physical examination of our patient.

“ 19th December, 1912.—General appearance improved. Cheeks have some colour and face looks fuller. The arms look thin, and the hands are cold and clammy. Nails a distinctly blue tinge. He complains now of pain across lower part of back and into right hip. He has full control over bladder and rectum.

“ *Lower extremities* look wasted.

“ *Motor phenomena*.—He can flex and extend at hip, knee, and ankle joints, but though he can brace his limbs in any direction, asking him to move them against resistance suggests marked paresis.

“ *Co-ordination*.—No evidence of inco-ordination.

“ *Sensory phenomena*.—Sensation to touch, pain, temperature, and muscle sense all normal.

“ *Reflex phenomena*.—Knee-jerks distinctly exaggerated, and easily elicited above patella. No rectus clonus, ankle-jerk exaggerated on both sides, but no definite ankle clonus was obtained.

“ Babinski absent.

“ The abdominal reflexes, epigastric and hypogastric, were present on each side.

“ *Vasomotor and trophic phenomena*.—None except general wasting.

“ *Electrical reactions*.—Muscles reacted to a strong faradic current.

“ On asking him to get out of bed he did so in a bent forward condition, and then straightened himself up with a jerk, throwing his shoulders back as in a case of pseudo-hypertrophic muscular dystrophy. If seated he rises with difficulty, climbs up along his thighs, and gets his back straightened. Once straight he can walk fairly well. The lower part of his back was kept absolutely rigid, and he could make no attempt at bending his back when asked to stoop. Tender on pressure over lumbar region and upper part of sacrum, though pressure elsewhere on spine gave no pain. There was a suspicion of superficial oedema. No evidence of any abscess formation in either iliac fossa.

“ He goes down stairs holding the banisters, but finds coming up more difficult.

PLATE XXI.

SIR JOHN MOORE "A Case of Typhoid Spine."

Left.

Right.



- a.* Third lumbar vertebra showing periosteal mischief.
- b.* Intervertebral space filled up by inflammatory changes.
- c.* Fourth lumbar vertebra, upper half affected.

“Diagnosis appears to lie between typhoid spine (Gibney) and commencing tubercular disease. I suggested an *x*-ray examination.”

The diagnosis seemed to me to lie between a toxic peripheral neuritis, a tuberculosis of the sacro-iliac synchondrosis, and “typhoid spine.” With the view of clearing it up, Dr. W. Geoffrey Harvey took an *x*-ray photograph on Saturday, December 21st. He reported to me in the following terms:—

“There is a quite observable osteo-periosteitis on the left side of the third lumbar vertebra spreading down to the fourth. This seems to be in accordance with the pathology (so far as I know it) of ‘typhoid spine.’ I would consider the radiographic finding to be opposed to the diagnosis of tubercular disease—at any rate, I have never seen a similar condition in caries, or, indeed, a similar radiograph; in my opinion, the appearances are strongly against a tubercular hypothesis.”

The diagnosis being now cleared up, the prognosis and treatment became easy. The former was favourable, but the opinion was given that recovery would be slow. As a matter of fact, it was not complete until the beginning of March. Treatment consisted in rest to the spine, with massage of the back and lower limbs. The bowels were kept moving by compound cascara tablets taken as required, and for four days out of every seven a tonic mixture containing in each dose four minims of liquor strychninæ.

That this was an example of the rare complication or sequel of enteric fever which was first described in 1889 by Dr. Gibney, of New York, in a communication to the American Orthopædic Association under the name of “the typhoid spine” there can be no doubt. The symptoms and course of the affection, and, above all, the *x*-ray photograph taken by Dr. Harvey, render the diagnosis absolutely certain. In fact, the clinical picture of the condition is clearer and more convincing in Mr. C. D.’s case than in some of the examples advanced by Dr. Gibney, and, five years later, in a paper^a by Sir

^a The Johns Hopkins Hospital Reports. Volume IV. No. 1. Report on Typhoid Fever. Baltimore: The Johns Hopkins Press. 1894.

William Osler on the "Neurosis following Enteric Fever, known as 'The Typhoid Spine.'" Dr. Gibney described four cases under this title. He looked upon the lesion as a perispondylitis, "meaning an acute inflammation of the periosteum and the fibrous structures which hold the spinal column together." He stated that his reason for the use of the term "typhoid spine" "was the production of acute pain on the slightest movement, whether lateral or forward, and the absence of any marked febrile disturbance or neuralgia." Osler, while wishing not to be understood as holding that there may not be a perispondylitis, states that in both of his own cases the general impression given by the patients was that they were neurasthenic. He writes:—"I cannot help feeling that many of [the instances of typhoid spine] are examples simply of the painful neurosis formerly known as 'spinal irritation' and the 'railway spine,' in both of which the patient may have pains on the slightest movement of the back or of the legs." In the instance which I now report positive evidence of periosteal and osteal mischief is present—capable of demonstration by a diagnostic method unknown when Osler wrote in 1894—namely, *x*-ray photography.

Typhoid spine is of extremely rare occurrence. In my thirteen years' tenure of office as Visiting Physician to Cork Street Fever Hospital, Dublin, I never saw or even heard of a case. The present example is the first and only one of which I have had personal knowledge. In his admirable work on "Infectious Diseases,"^a Dr. Claude Buchanan Ker, Medical Superintendent of the City Hospital, Edinburgh, writes:—"I have not, personally, had the good fortune to see a case, which suggests that this sequela of enteric fever is rare, for the symptoms appear to be far too obvious to be overlooked."

The most recent, and one of the fullest contributions to the literature of typhoid spine is an article by R. J.

^a Oxford Medical Publications. London: Henry Frowde and Hodder & Stoughton. . 1909. Page 277.

Weissenbach and J. Bonheure, which was published in the *Gazette des Hôpitaux*, Paris, 1912, tome LXXXV., page 1775, and abstracted by Dr. F. R. B. Atkinson in the *Medical Chronicle*, March, 1913, page 350. The bibliography appended to this article includes 100 cases of the affection; only one case proved fatal, and in it the autopsy revealed periosteitis of the dorsal spines with an obscure lesion of the cord. In 76 per cent. of the cases the patients were aged between fifteen and thirty-five years. The condition occurs most commonly (65 per cent.) during or shortly after convalescence. In the majority of instances (80 per cent.) the lesion is situated in the lumbar region: in two cases it attacked the cervical part of the vertebral column. Radiography shows the normally clear space corresponding to the intervertebral disc to be occupied by a dense shadow. The peri-vertebral tissue is much altered in appearance. The transverse apophyses, the ligaments, and the vertebral bodies seem to be surrounded by a zone of ossification. Lesions of the vertebral bones are less constant, but they may show an increased density.

NORMAL HORSE SERUM.

INJECTION of this has been recommended in various conditions in which the coagulative power of the blood is deficient—as in hæmophilia, severe anæmias, and purpura with hæmorrhagic tendencies. Applied locally to bleeding surfaces it is said to act as a styptic, and to have a favourable action on septic wounds. There is, however, an element of danger in the use of this or any other serum in certain conditions (anaphylaxis), and while this is slight because of the rarity of dangerous effects it is sufficient to make the use of serums for purposes in which their value is extremely doubtful a questionable procedure. Sterile normal horse serum is marketed by the National Vaccine and Antitoxin Institute, Washington, D.C., in syringes containing 10, 15, and 20 cc.—*New and Non-Official Remedies*, 1913, page 236.

PART II.

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

Census of Ireland, 1911. General Report, with Tables and Appendix. Presented to both Houses of Parliament by Command of His Majesty. London: His Majesty's Stationery Office. 1913. Folio. Pp. lxvi + 604.

AN Act for taking the Census for Ireland in the year 1911, shortly called the "Census (Ireland) Act, 1910" (10 Edward VII., and 1 George V., Chapter 11), received the Royal Assent on July 26, 1910. By Section 1 of the Act the "Census Day" was fixed to be Sunday, April 2, 1911. On December 30, 1910, the Earl of Aberdeen, as "Lord Lieutenant-General and General Governor of Ireland," issued a warrant appointing "Edward O'Farrell, Esquire, and Daniel Simpson Doyle, Esquire, to act as Commissioners along with Sir William John Thompson, Doctor of Medicine, the Registrar-General of Births, Deaths, and Marriages in Ireland, for carrying into effect the provisions of the above cited Act."

On February 25, 1913, the Census Commissioners submitted to His Excellency the Lord Lieutenant their "General Report," which occupies fifty-four folio pages, the remainder of the portly volume before us being taken up with the Tables on which the Report is based, together with an Appendix giving copies of circulars, forms, &c., which were issued from the Census Office in connection with the taking of the Census.

The Census Act of 1910, in its general provisions, followed the terms of the corresponding Act of 1900, save that it directed that in the case of married persons particulars should be obtained of the duration of marriage and the number of children born of the marriage, and the number of such children living.

As on previous occasions, the duties of Enumerators were discharged by members of the Royal Irish Constabulary and the Dublin Metropolitan Police, supervised by the District Inspectors and Officers of those Forces. The Commissioners, at the conclusion of their Report, express their cordial acknowledgments to both officers and men for the very efficient way in which their respective duties were performed.

All the necessary forms had been distributed on March 31, 1911. The collection of the returns began on Monday, April 3. On the 18th of May the Commissioners were able to submit to Government, for presentation to Parliament, a preliminary report, including figures for the several parliamentary divisions in 1911, and also for the City of Dublin and the urban districts included in the Dublin Registration Area, as well as for provincial towns which at the previous Census (1901) had a population exceeding 10,000.

A "General Summary" occupies two pages (xvii and xviii). Then follow the Commissioners' remarks on the other Tables under the headings:—(1) Area, houses and population; (2) ages; (3) civil or conjugal condition; (4) occupations; (5) birth places; (6) sick and infirm; (7) inmates of public institutions; (8) religious professions; (9) education; (10) Irish language; (11) emigration; (12) miscellaneous; (13) land census; (14) particulars as to marriages.

We can only briefly refer to a few of the multitudinous facts to which the Commissioners draw attention in their interesting remarks.

The population of Ireland on April 2, 1911, was 4,390,219, "occupying 861,879 inhabited houses, on an area of 20,253,100 statute acres, exclusive of 601,622 acres under water, but inclusive of 2,960,072 acres under plantations, bogs, barren mountain, roads, fences, town-sites, waste, &c."!

The decline of the population in the decennium was by far the smallest recorded at any Census since 1841, being 68,556, or 1.54 per cent. of the population in 1901, as com-

pared with a decrease of 5.23 per cent. in the preceding decennial period (1891-1901). The urban population was 1,470,595, compared with 1,384,929 in 1901; the rural population was 2,919,624, compared with 3,073,846 in 1901. This influx into the towns cannot be regarded with unqualified satisfaction. But it is reassuring to observe that the house-accommodation has not only expanded but improved, for the number of inhabited "first-class houses" (*i.e.*, those occupied by one family) rose during the decade from 75,225 in 1901 to 84,406 in 1911, and "second-class houses" increased in the same period by 61,791. On the other hand, "third-class houses" diminished by 62,474, while "fourth-class houses" (*i.e.*, houses built of mud or perishable material having only one room and window) fell to 5,092 in 1911 from 9,873 in 1901. The better housing of the population indicated in these significant figures cannot fail to have a highly beneficial effect on the public health of the country.

The respective populations of the County Boroughs range from 27,464 for Waterford to 386,947 for Belfast. The population of the County Borough of Dublin is 304,802. The number of persons per acre ranges from 15.81 in Londonderry to 38.53 in Dublin.

The only counties in which there has been an increase of population are Dublin and Kildare. In the former the increase is 9.41 per cent. between 1901 and 1911, in the latter it is 4.82 per cent. Leitrim, Roscommon, and Clare show the largest decreases in population—namely 8.31, 7.70, and 7.21 per cent. respectively.

With regard to "Ages of the People," the outstanding feature of the present Census is the great increase in the number of people returned as being over 65 years of age. The figures are, to say the least, puzzling—total over 65—in 1891, 300,667; 1901, 284,506; 1911, 440,898!

Have old-age pensions—that "rare and refreshing fruit"—prolonged the "expectation of life," or suddenly effected a revision of age? It is a curious thing that the number of centenarians fell from 497 in 1901 to 314 in 1911—a decrease of 183 in ten years. Has the luxury of

old-age pensions cut short the life of the oldest inhabitants?

Under the heading "Occupations of the People" we find that physicians and surgeons have slightly increased in number from 2,221 in 1901 to 2,259. Female qualified practitioners (included in these figures) numbered 33 in 1911 compared with 20 in 1901. "The females connected with the Medical Profession" (so write the Commissioners) "have risen from 2,093 in 1901 to 6,679 in 1911. This number is principally composed of trained nurses, &c."

It will be seen by reference to Table 77 (pages 146, *et seq.*) that the "sick and infirm" of all kinds on the Census night of 1911 numbered 67,678, or 1 in 65 of the whole population. This had been the ratio also in 1901. Of these, 30,919 were "temporarily diseased," and 36,759 "permanently diseased." Of the temporarily diseased, 10,819 were at their own homes; 6,195 were in infirmaries and general and special hospitals; and 13,905 were in workhouse hospitals.

Of the 30,919 persons returned as sick on the night of the recent Census, 166 were cases of enteric fever, 60 of typhus, 227 of measles, 533 of scarlet fever, 153 of whooping-cough, 176 of diphtheria, 1,454 of influenza, 4 of dysentery, 3,086 of tuberculosis, 485 of cancer, 2,703 of rheumatism, 2,798 of diseases of the nervous system, 676 of diseases of the organs of special sense, 1,238 of diseases of the circulatory system, 3,002 of diseases of the respiratory system (no doubt including pneumonia), 40 of diarrhoea, 1,635 of "other diseases of the digestive system," 943 of the genito-urinary system, 1,348 of diseases of the skin and cellular tissue, 1,587 of diseases of the bones and locomotor system, and 2,020 cases of injury caused by accident or otherwise.

The facts as to the "permanently diseased" are full of interest, however sad they are. Tables 82 to 89 of the Report contain the results of a special inquiry regarding the prevalence of blindness in Ireland on the night of April 2, 1911. On that Census night the number of the totally blind was 4,312, or 59 more than in 1901. The

ratio was highest in Munster, being 1 in every 741 of the population, and least in Connaught, 1 in every 1,212.

Cataract was assigned as the cause in 576 cases, diseases of the brain or nervous system in 221 cases, small-pox in 71, measles in 61, influenza in 32, scarlatina in 29. Ophthalmia was stated to have caused blindness in 64 cases, trachoma in 14. In the Census of 1871, 526 cases of blindness in Ireland were attributed to small-pox. In 1881 the number fell to 359, in 1891 to 221, in 1901 to 128, and now in 1911 to 71.

In addition to blindness, special sections are devoted to the deaf and dumb, and the dumb not deaf, and also to the number and condition of lunatics in this country.

By referring to Table 104 (pages 180, *et seq.*) it will be seen that the lunatics in Ireland on Census night, 1911, numbered 23,994 (12,446 males and 11,548 females), and that the number of idiots was 4,443 (2,477 males and 1,966 females). But the dreadful fact appears from a comparison with the previous six Censuses that the number of lunatics and idiots in Ireland has steadily increased from 9,980 in 1851, when the population was 6,552,385, through the succeeding decades to nearly three times as many in 1911, when the population was 4,390,219—more than 2,000,000 less. Another way of looking at this startling fact is by ratios. Thus, in 1911, one in every 154 of the population was a lunatic or an idiot, in 1901 one in every 178, in 1891 one in every 222, in 1881 one in every 281, in 1871 one in every 328, in 1861 one in every 411. In 1851 the ratio was one in every 657 of the population. The cause of the lunacy or idiocy was stated in 14,483 of the total number of cases (28,437). Among these 14,483 cases, 1,970 were attributed to moral or mental causes, 6,834 to physical causes, while 5,679 were returned as hereditary.

Table 114 shows that on the night of the Census there were 38,313 inmates (19,886 males and 18,427 females) in the workhouses throughout Ireland, as against 42,932 inmates in 1901. Thus there is a decrease of 4,619, or 10.8 per cent., in 1911. These figures point to a great

improvement in the material condition of the poorer portion of the population, due, the Census Commissioners have no doubt, in a great degree to the old-age pensions.

It will be seen from Table 142 that the total number of persons who could speak Irish has fallen from 680,245 in 1891 to 641,142 in 1901, and to 582,446 in 1911, the proportion per cent. of the population in these years being represented by 14.5, 14.4, and 13.3, respectively. This is all the more remarkable when one considers what strenuous efforts have been and are being made to make a study of the Irish language compulsory in the primary and intermediate schools of the country as well as in the National University of Ireland. In 1901, 20,953 persons were returned as speaking Irish only. In 1911 the number was 16,870, a falling off of 4,083.

The influence of "compulsory Irish" in education, however, is shown in an increase of 33,169 in the speakers of Irish under 18 years of age (including 3,462 children under 10 years of age). The number of Irish speakers aged 18 years or upwards decreased by 91,865, representing a net decrease of 58,696 in 1911, as compared with 1901.

Tables regarding emigration during the past decade have been compiled from Returns presented to Parliament by the Registrar-General for Ireland. During the ten years ended March 31, 1911, 345,159 natives of Ireland left the country with the intention of permanently settling elsewhere. Of these emigrants, 83.3 per cent. were aged between 15 and 35 years. During the previous decade the number of emigrants had been 430,993, so that the drain is lessening. In sixty years, from May 1, 1851, to March 31, 1911, the number of Irish emigrants was 4,191,552—2,178,296 males and 2,013,256 females. These are truly wonderful figures, falling short of the total population of Ireland in 1911 by merely 198,667.

Very interesting particulars relating to the duration of the married state and the number of children born alive and the number of children living on Census night are contained in a series of tables. As has already been

stated, these particulars were required for the first time to be supplied in the householders' form at the Census of 1911. A tabular statement is given at page lxxv., from which it is seen that the average size of a family for Ireland as a whole is higher, and that the number of deaths of children in a family is lower, than that for either the six County Boroughs, or the Dublin Registration Area, or the County Borough of Belfast. Taking the whole of Ireland, the average number of children to a family is 4.09, and the average of those who have died is 0.66 per family. The corresponding figures for the six County Boroughs are 3.84 and 0.89; for the Dublin Registration Area, 3.69 and 0.87; for Belfast County Borough, 3.72 and 0.79; and for Ireland outside the six County Boroughs 4.17 and 0.60 per family.

We have culled only a few of many features of interest contained in this fine Report for the purpose of this review. In conclusion, we congratulate the Census Commissioners of 1911 on the very solid contribution to the Vital Statistics of Ireland which they have made in connection with this second Census of the Twentieth Century.

J. W. M.

The Practitioner's Vade Mecum (P. V. M.), or How to Cut the Drug Bill. By A. HERBERT HART, M.S., M.D. Dur., M.R.C.S. Eng., L.R.C.P. London, and L.S.A. London. Third or National Insurance Edition. London: John Bale, Sons & Danielsson, Ltd. 1913. Cr. 8vo. Pp. xxxiii + 122.

THIS booklet of 122 pages appears very opportunely for medical practitioners who have joined the panel under the National Insurance Act. It contains a large number of prescriptions for stock formulæ, which are excellent in themselves and have the further advantage of being capable of being prepared without the use of alcohol, thus reducing the cost of medication to the minimum.

Not alone are the preparations enumerated inexpensive

and of therapeutic value, but they are also made palatable. And as we read how they are prepared we think that the method adopted might well be used in the compounding departments of our hospitals and dispensaries. The author has made it clear that the use of rectified spirits is unnecessary in the preparation of ninety-eight per cent. of our most prescribed tinctures, solutions, and mixtures ; and that its use in such is a waste of the funds of our medical charities. But, much as we value the book, we cannot approve Chapter V.'s invalid foods, it reads as if the scissors were employed in cutting out laudatory paragraphs from the advertisements of the foods, and, in our opinion, disfigures the book.

The Medical Who's Who, 1913. London : The London & Counties Press Association, Ltd., 39 King Street, Covent Garden, W.C. Cr. 8vo. Pp. lxiii + 593.

OPINIONS may and do differ as to the necessity for, or desirability of publishing, such a volume as this. If its circulation was, or could be, confined to the medical profession, the objection to a "Medical Who's Who" would be largely discounted. But the present work is published without conditions and is intended for the public as well as for the profession.

In their Preface the Publishers state that they have been informed that many members of the medical profession have not sent in particulars under the impression that *The Medical Who's Who* is to contain a selected list of practitioners. This is not so, and the Publishers quote the following paragraph which appeared in the *British Medical Journal* of November 16, 1912 :—
"In response to an inquiry by the Medical Secretary of the British Medical Association the Publishers of *The Medical Who's Who* state that it is their intention to include in the publication the names of all members of the Medical Profession who make returns on the form sent. This statement removes the objection to the publication on the ground that it was a limited list."

It so happens that the present issue is "a limited list," but this is not the Publishers' fault. The fact is that many members of the profession still look askance at what will really prove to be a very useful publication in future years. They have withheld their names, or omitted to return the form supplied to them in common with all their professional colleagues. We miss from the pages of this year's edition the names of some of the foremost names in contemporary medicine and surgery in Ireland. We appreciate the motive which has led to this self-effacement. As, however, the progress which *The Medical Who's Who* has made even in one year is phenomenal, we join with the Publishers in thinking that "in due course the work will be thoroughly representative of the whole of the Medical Profession."

The volume runs on very much the same lines as the well-known *Who's Who*—a publication which has become indispensable as a work of reference year by year, with (shall we say, notwithstanding?) its piquant autobiographies.

A Text-book of General Pathology. Edited by M. S. PEMBREY and J. RITCHIE. London: Edward Arnold. 1913. Demy 8vo. Pp. xii + 773.

THE contents of this volume include the contributions of the joint Editors and of twelve collaborators. And the collective text is, accordingly, in one important respect characterised by the democratic decentralisation of the scientific, as well as of the political, wisdom and power of the twentieth century. We believe that in the present instance a great increase of centrifugal illumination has been secured by the establishment of so many polished facets of reflection. There is a greater uniformity of level in style and attainment, too, than is that of the average attained—in our own experience—in joint-stock intellectual ventures.

There are twenty chapters in this handsome, well-bound, and beautifully-printed octavo. (But there are few

illustrations; save the four plates which depict pathological processes in the nervous system, and a few outlines and sketches! The writers have, however, made excellent efforts to provide the required enlightenment by clarity of descriptive text). The first chapter contains the Introduction only, and the second deals with the Pathology of the Blood. The third embraces the subject of Inflammation—one which always, we hope to be excused for mentioning parenthetically—recalls the opening surgical lecture of a Dublin professor of surgery of our own student days, who never failed to say:—"Gentlemen, at the opening of this course, you will, of course, ask me what is inflammation? My answer to this question is, I don't know, nor does any other man; go home and read your books!" In the present case, the subject is treated by G. W. Ainley Walker, who tells us that inflammation is "the response to injury." And although this statement of fact can hardly be said to bring us much nearer to the heart of the mystery of the nature of this pathological process, we can console ourselves by remembering that no pretentious and undemonstrable hypothesis is offered; while the author presents us with a well-written and well-reasoned account of the present state of our knowledge of the subject. And we are very pleased to observe that the mental, as well as pathological, atmosphere is less densely clouded by the inevitable locust-shower of micro-organisms! He gives us some hope that in the not very far distant future some rays of true enlightenment may be allowed to reach us through the interspaces.

Chapter IV., which deals with the subject of infection, is by the same writer; and gives a clear, up-to-date summary of our present knowledge—real or assumed—of this very important subject. It is not, of course, through any fault of the author that he has been obliged to remind us of "the classical researches of Pasteur," a reference which never fails to elicit a more than passing pang of regret for the fact—which seems to be very generally lost sight of—that this great master of chemico-physical research was not a medical man at all. Thus is our present-

day pregnant science of bacteriological pathology the result of a *not* exactly *logical* attempt to throw a bridge from the one (only) bank which we occupy, across the abysmal gulf which separates living and non-living forms of matter; and to reduce to a common denominator the fractional facts of our knowledge of the data of living animal and vegetable matter, and the reduction of the same to obedience of the demonstrable laws of physical science.

But in the present volume we have at least a very clear statement of our collective knowledge of pathological data, and the tone is so very generally healthy that we do not propose to criticise details—which, after all, could not have the effect of enlightening the reader much more regarding the value of the volume than did the “musty” procedure of presenting the specimen brick in case of the saleable mansion. So we conclude by a strong expression of the opinion that this volume thoroughly deserves to be widely read by both students and practitioners.

Practical Guide to Diseases of the Throat, Nose and Ear.

By WILLIAM LAMB, M.D. London: Baillière, Tindall & Cox. 1913. Cr. 8vo. Pp. xvi + 352.

It is our pleasing duty to again refer to Dr. Lamb's book on diseases of the throat, nose and ear. In the third edition, which is now under consideration, several matters of importance have been added, and the author's accounts of operations, &c., have been brought up to date. One of the chief merits of the work is that it is written by a practical man, and professes to include only subjects and treatments which he is in the habit himself of dealing with and treating. It does not attempt to mention all the possible treatments that are or ever have been used.

There are plenty of drawings and photographic reproductions scattered through the text, fully illustrating the important points to which they refer. Especially worthy of mention are the new sections on Oral Sepsis, Examination of the Labyrinth, and the conservative Mastoid operation, which is an operation first described by Mr.

Heath, and is a very happy mean between the simple opening of the mastoid antrum, and the radical mastoid operation, enabling the operator to get better drainage and still preserve, in a large measure, the hearing, in those cases where the disease has not extended so far as to render complete exenteration necessary.

Dr. Lamb's description of the commoner operations, such as that for the removal of adenoids and tonsils, is excellent, and will be of great assistance to the beginners who read his book.

The book may be confidently suggested to teachers for recommendation to their classes, and to senior students and young practitioners who are anxious to gain an insight into the diseases and operative procedures connected with this region.

Old Age: Its Care and Treatment in Health and Disease.

By ROBERT SAUNDBY, M.D., Edin.; Hon. LL.D., Andrews and M'Gill; Hon. M.Sc., Birm.; Fellow of the Royal College of Physicians, London; Hon. Fellow of the Royal College of Physicians, Ireland; Professor of Medicine in the University of Birmingham. London: Edward Arnold. 1913.

WE have read through this book with much interest. Professor Saundby is undoubtedly right in thinking that there is plenty of room for a book on the subject, and more especially for one that reflects the wisdom gained in forty years' practical medical work. There is hardly a page that does not contain some sapient remark, and the hints on treatment are especially useful. The young practitioner will, we think, derive much profit from a perusal of its pages. Most men, when first qualified, are capable of dealing with disease as met with in average middle-aged patients, such as constitute the great bulk of cases treated in hospital, but they are woefully ignorant of disease and its varieties as met with in the extremes of life, and feel quite at sea in recommending either treatment for a baby or in endeavouring to soothe and alleviate the querulous

complaints of old age. To all such this book should come as a boon, and we may say that it should not only be read, but also referred to in connection with actual cases as they crop up. No attempt at completeness, of course, is made: pathology is almost unmentioned except in a general way, but the ills of old age, and the variations that diseases manifest in old age as compared with the same diseases in early and middle life are skilfully described. The style is pleasant and most readable, and the general get-up of the book all that is to be desired. In addition to dealing with the diseases inherent to advanced life, chapters are also devoted to the physiology of age. Useful appendices, containing formulæ, dietary tables, recipes, &c., complete the volume.

Medical Electricity: a Practical Handbook for Students and Practitioners. By H. LEWIS JONES, M.A., M.D., F.R.C.P. Lond.; Consulting Medical Officer to the Electrical Department in St. Bartholomew's Hospital; Honorary Fellow of the American Electrotherapeutic Association; Member of the Société française d'Électrothérapie et de Radiologie; Associate of the Institution of Electrical Engineers. Sixth Edition, with Illustrations. London: H. K. Lewis. 1913. Demy 8vo. Pp. xv + 551.

IN the six and a half years which have elapsed since the publication of the fifth edition of this well-known work, considerable progress has been made in the direction of placing electrotherapeutics on a sound scientific basis. It is pretty well established at the present day that "electrical applications act either by the chemical (ionic) effects which they produce, or by their thermal effects." Accordingly, Dr. Lewis Jones, in the tenth chapter, discusses at some length ionic medication, the thermal effects of high-frequency currents, the effects of *x*-rays and of radium, and the subject of phototherapy.

We have compared the fifth with the present edition, and are in a position to state that the whole book appears to have undergone a very complete revision. In his

Preface the author modestly states "that the subject of x-rays in diagnosis has become too large to be fully dealt with in the space available in this volume." Nevertheless, in Chapter VIII., which extends to 42 pages of demy octavo size, a very complete account will be found of the Röntgen rays and their application, while later chapters give much information as to both the diagnostic and the therapeutic value of these marvellous radiations.

An appendix contains a table of electro-chemical equivalents expressed in milligrammes per coulomb and per milliampère minute. In the same table a column gives the relative velocities of ions determined by Professor S. Leduc for the tissues of the body. The velocities of the anions are compared with chlorine as unity, those of the kathions with potassium as unity. In the appendix also will be found a very useful list of towns and places, with particulars of their electric lighting supply under the headings: System: A. Alternating, D. Direct; Pressure of Supply; Periodicity of Alternating Supply. The author expresses his thanks to the Editor of *The Electrician* for his courtesy in allowing him to compile this list from the tables which are published by that journal in January of each year.

It only remains for us once more to recommend this book as a standard and well-written work on the too little understood subject of which it treats.

CORRECTION.

IN the May issue of this Journal, in noticing the "Surgical Clinics of John B. Murphy, M.D.," the Reviewer wrote:—"If at the end of every sixth number an index were published, the value of the work would be greatly enhanced." The publishers—Messrs. W. B. Saunders Company—point out to us that, as a matter of fact, an exhaustive index, extending to 11 pages, completes the concluding number of Volume I. Unfortunately, that number appears to have gone astray, and was not in the Reviewer's hands when he wrote. We apologise for the mistake which arose in consequence.—[THE EDITORS.]

PART III.

MEDICAL MISCELLANY.

Reports, Transactions, and Scientific Intelligence.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

President—WALTER G. SMITH, M.D., F.R.C.P.I.

General Secretary—J. A. SCOTT, M.D., F.R.C.S.I.

SECTION OF OBSTETRICS.

President—A. J. HORNE, F.R.C.P.I.

Sectional Secretary—G. FITZGIBBON, M.D., F.R.C.P.I.

Friday, March 7, 1913.

DR. HENRY JELLETT in the Chair.

An Instrument designed to minimise the Risks of Septic Infection during certain Gynæcological Operations.

DR. SPENCER SHEILL exhibited an instrument designed as above, and explained its working.

THE CHAIRMAN asked what was the exact type of case in which it was proposed to use the instrument.

DR. SHEILL suggested that it would be found useful for the introduction of drainage after sub-total hysterectomy in cases where there was a suspicion of sepsis.

THE CHAIRMAN said that personally he would be more inclined to drain through an opening in Douglas's pouch than through the cervix. He thought that the apparatus would be very suitable for this purpose.

DR. SHEILL said that the object he had in designing the instrument was to avoid the necessity for pulling the probe back after the gauze drain had been introduced. He pointed

out that in some cases posterior fornix drainage is not indicated; for instance, in cases of uterine rupture cervical drainage would be indicated, and his instrument would, he considered, be the safest way to drain.

Two Cases of Genital Tuberculosis—(a) of Tubes, Uterus and Rectum; (b) of Tubes, with Carcinoma of Ovary.

DR. H. JELLETT exhibited specimens taken from two cases of genital tuberculosis. The first involved the tubes, uterus and rectum. The patient was an 8-para, aged fifty-eight. She complained of hæmorrhage for five months, with pains in the lower abdomen, as a rule, before the hæmorrhage started. She was passing fæcal matter through the vagina, and it was, therefore, perfectly obvious that there was a fistulous communication between the rectum and the uterus. The disease was first thought to be malignant, but an examination of uterine scrapings showed it to be tubercular. On opening the abdomen the uterus was found to be studded with tubercle, and was adherent to the posterior pelvic wall. There was a tumour the size of a hen egg in relation to the rectal wall, and adjacent to the uterus. The rectum was resected without separating it from the uterus, which was removed at the same time. The reason for resecting the rectum was that it appeared to be involved in the tumour. On examination of the latter, however, it proved to be a mass of fat and of tubercular growth in the mesentery of the rectum. The lumen of the rectum was considerably reduced. The cavity inside the uterus contained some breaking-down tubercular material. An end-to-end anastomosis of the rectum was done, and held for eleven days, and then began to leak. He mentioned that no other course could have been adopted at the time of the operation, as everything then suggested that one would find a broken-down mass involving the rectum wall.

In the second specimen there was tubercular disease of the tubes associated with carcinoma of the ovaries. The patient, whose age was thirty-two, was admitted to hospital complaining of sterility and of pain in the back. The first thing to which the patient drew attention was a swelling along the left side of the lumbar spine. In consequence of this the consulting surgeon saw her, and a tubercular abscess of the spine was diagnosticated. In

addition, an examination made under an anæsthetic showed that the uterus was retroverted and adherent, and there was a mass in Douglas's pouch, in which it was embedded. There were also numerous nodules and chains of enlarged glands to be felt in the abdomen. As there was evidence of primary pelvic disease, the abdomen was opened and the appendix removed. There were numerous nodules studded over the mesentery and intestines. On examining the nodules more carefully it was found that at the ileo-cæcal valve there was almost complete obstruction. An anastomosis between the ileum and rectum resulted very satisfactorily. The condition at the time of operation was very bad, but up to the present the patient is no worse than when she came into hospital.

A point of interest in the case was that on cutting into the ovaries it was found that, while the tubes were tubercular, the ovaries were carcinomatous.

He invited the opinion of members of the Section as to whether tubercular disease of the tubes is commonly accompanied by tubercular disease of the uterus, and got well after removal of the tubes. Some authors stated that this was usual, but he had previously never found tubercular disease of the uterus that did not eventually lead to serious complications.

DR. HASTINGS TWEEDY asked at what distance from the actual opening the anastomosis was effected. In his experience a low end-to-end anastomosis of the rectum was a very difficult operation, and nearly always ended in fistula. With regard to the question as to tubal and uterine tuberculosis, he could only say that whether the uterus was or was not involved he had known patients to get well after resection of the tubes. He instanced the case of a lady of good position who, after being six weeks married, was found to be suffering from very extensive tubercular disease of the tubes, and to be exuding a thick, caseous material from the cervix, but whether the substance came from the tubes or the uterus he did not know. He removed the diseased tubes, and left the uterus and a small portion of the ovary, and for the last four years she has been in perfect health, and in no way suffered from tubercular disease. He stated that tubercular disease of the tubes was frequently seen, but that disease of the uterus was rarely met with.

DR. SHEILL said that he had seen a pretty considerable number of cases of disease of the tubes of tubercular origin, but he had seen only one case of definite tubercular disease of the uterus.

DR. JELLETT, replying to the remarks, said the excision of the rectum was fairly low—i.e., about four inches above the anus. He found no great difficulty about the end-to-end anastomosis, and it was quite satisfactory for eleven days, when it broke down. Personally, he would have considered the anastomosis in the second case between the ileum and the rectum more likely to break down, but it did not do so. He thought that Dr. Tweedy's case did not throw any further light on the point raised, as it was not definitely known whether there was tuberculosis of the uterus in it or not. He suggested, with a view to throwing further light on this important subject, that all operators should examine scrapings from the uterus in all cases of tubercular salpinx.

Clinical Notes of Two Instructive Cases of Uterine Rupture.

DR. SHEILL read a paper with this title.

DR. TWEEDY regretted that Dr. Sheill's paper did not come up at the last meeting of the Section, so that it might have been discussed in conjunction with Dr. Madill's cases. He thought it was always forgotten by men speaking of uterine tears that rupture of the uterus is one of the commonest accidents to women in labour; that the cervix tears in every case where an effort is made to distend it by artificial means was certain, and these tears are sometimes very extensive. Furthermore, they very often escaped observation, but they constitute a very great danger in subsequent pregnancies. In this country rupture of the uterus was nearly always accompanied by rupture of the vagina, and occurred quietly and before the os was freely dilated. Classical symptoms of threatened rupture were seen only in connection with pelvic contractions or abnormal presentations. He pointed out that when there is a cicatrix in the cervix it is very unlikely to dilate naturally, and, therefore, a tear follows and the tear had an attraction for the old scar. He had seen this occur in cases in which there was a history of previous difficulty in delivery. He differed from many as to the treatment of these uterine tears. He preferred to plug the uterus rather than perform an abdominal section, it being his opinion that

the majority of cases got well without any treatment, and the plug was effectual in others. It was remarkable how little hæmorrhage there was in some of these cases where death occurred from shock. Rupture of the uterus was accompanied by profound shock, and it had been suggested by some authorities that this shock arose from air embolus, and in such a case he could not see how abdominal operation would improve matters. The plug lessened shock and stopped hæmorrhage. He could never see the *rationale* of operation, because if there was profound shock the patient would die, and if there was no shock or hæmorrhage there was nothing to kill the patient. In the rare event of the fœtus and placenta lying free in the abdomen, abdominal section was indicated; but so long as extraction could be effected through the vagina this, he believed, would prove the safest operation.

DR. MADILL said he had the good fortune to operate on one of these cases which reached a favourable termination. He was in doubt as to what caused the rupture. On examination of the baby afterwards he could see that the caput was low down on the right parietal bone, which would mean that the left parietal bone had been held up; and this, coupled with the fact that the child was well over 8 lbs., might have sufficed to produce the rupture. As to the treatment of the case there was no doubt laparotomy was right, the fœtus being in the abdominal cavity. Dr. Tweedy had mentioned two dangers—*i.e.*, shock and hæmorrhage—but he did not refer to a third danger—*viz.*, sepsis. He agreed that plugging the rent would cause the least shock, but then he would like to know would it stop the hæmorrhage. In an early case of severity he did not see how the rent would be plugged tight enough to stop the hæmorrhage. If the abdomen was opened the shock might be increased, but then the increase was only whilst passing through the abdominal wall, unless the intestines were handled. If the abdomen was opened, and the uterus also happened to be removed, he considered that a most efficient drain could be established. If it could be ascertained that the rent was small or incomplete he would consider plugging of some value; but where there was any doubt he suggested that the safest plan would be to open the abdomen.

THE CHAIRMAN said that the treatment of uterine rupture

has been confused by the foolish truism—viz., that patients who are not operated on usually live, while those who are operated on often die. The reason of this is, of course, that the former are less serious cases, and of an entirely different type to those which are operated on. Statistics to show that plugging is better treatment than laparotomy are absurd, because plugging is suited to one type of case, and laparotomy to an entirely different type. The same methods could not be adopted in a case of uterine rupture, in which the patient was suffering from serious complications, and in cases in which the patient was not suffering from any complications. To say that plugging was a suitable line of treatment in every case he regarded as entirely illogical. Each case must be treated on its merits, and in his opinion there was no other treatment that could have been adopted in Dr. Madill's case than that to which he resorted. He then referred to three cases in which operative treatment was necessary owing to the escape of the child into the abdomen, and showed that two of these resulted satisfactorily, and that in the fatal case operation had been postponed to try to bring the patient into a more favourable condition for operation.

DR. SHEILL, replying to the remarks, said that in a general way Drs. Tweedy and Madill seemed to take extreme views, and he would be satisfied to take up a position half-way between. He did not believe operation should be done in every case. In minor cases of incomplete rupture, of course, plugging after the child was delivered would be indicated.

Gonorrhœal Vaginitis treated by Vaccine.

DR. GIBBON FITZGIBBON read a paper on this subject. He recorded six cases treated by vaccine, five with good results; the sixth had appeared cured, but relapsed or else had been reinfected. He considered that vaccines to be effective should be made from cultures grown fresh from the human host, but that they need not be autogenous. Local treatment, in combination with vaccine, is advisable, and probably necessary, certainly in the chronic cases with mixed infection.

DR. SHEILL said he considered the paper of extreme importance from the point of view of treatment of gonorrhœal infection in young children, as in such cases they were con-

fronted with many difficulties in local treatment, and, therefore, if there was another means of treatment, it should be pushed. He did not think local treatment should be done away with, but he considered vaccines a very useful adjunct.

DR. TWEEDY considered Dr. FitzGibbon fortunate in having seen so much gonorrhœal vaginitis. He had always found it very hard to be sure of the infection.

DR. MADILL said he had seen a good deal of gonorrhœal infection in the extern department of the Rotunda Hospital, and he had tried many varieties of local treatment. He thought the best results were produced by protargol. He was struck with the chronicity and difficulty of diagnosis in these cases. He pointed out that Professor Bumm had described five kidney-shaped intracellular diplococci, one of which was Gram-positive, and the other four negative to this stain, and the only difference he knew between these was by culture. He thought gonococcus was very difficult to grow. He went on to describe the methods adopted at Wertheim's clinic for making this vaccine, and said that the dosage given was rather smaller than that indicated by Dr. FitzGibbon, the dose being 5 millions of a mixed vaccine every forty-eight hours, followed by autogenous gonorrhœal vaccine. In most cases good results were obtained, and in cases where the results did not materialise they were controlled by estimation of the opsonic index. No case was considered cured until the microscope failed to find anything of the nature of gonococcus in the secretions.

DR. ROWLETTE said that in the present state of our knowledge of vaccines it was of importance that full details should be given in all cases reported, and he, therefore, considered that Dr. FitzGibbon's paper was of great assistance as a guide to treatment. There was great difficulty in treating cases of gonorrhœa in the female owing to the ease with which the infection became mixed. He did not think that the gonococcus disappeared for a considerable time, but it became crowded out by other organisms, and was not easily found. In some cases of gonorrhœa in the male that came under his notice it was found necessary to treat with staphylococcus after treating with gonococcus vaccine. A point of importance was that the vaccine should be made from a fresh culture. This he considered of more importance than that the vaccine itself should be fresh, although

vaccine kept for a long time did lose in efficacy. He believed that the slide shown by Dr. FitzGibbon was undoubtedly one of gonococcal infection.

DR. O'KELLY said that in some cases it was very questionable whether the infection was really gonococcal. He never succeeded in getting gonococcus to grow.

DR. HENRY MOORE said that in the cases in which vaccine was most useful—namely, at the very beginning of an attack, or in old-standing cases of gleet—an autogenous vaccine was impossible. His method of obtaining serum was to get Dr. Adrian Stokes to make a vaccine once a month from a male case on the second day of the urethritis. If in doubt as to the cause of an old-standing discharge or the cure of a patient who has suffered from gonorrhœa he gave from 15 millions to 30 millions, and examined the resulting discharge, if any, twenty-four hours after. In old-standing cases of posterior urethritis no local treatment was effective without vaccine, and the serum should not be more than four weeks old.

DR. FITZGIBBON, in replying to the remarks, said Dr. Tweedy had referred to the difficulty in diagnosis and in obtaining the gonococcus in slide smears, and he (Dr. FitzGibbon) admitted there was difficulty, and in a case in which there was mixed infection he had to make repeated examinations before he found it. In the children he had not met with the same difficulty. His experience was the same as that of Dr. Madill regarding local treatment in chronic cases. He had tried to get autogenous vaccine made from one case, but found it impossible owing to the mixed infection. He described the method adopted for obtaining the vaccine, and said that the culture was generally obtained from the male. He thought that Dr. O'Kelly was under the impression that the vaccine used was autogenous, but he pointed out that these cases responded to a definite gonococcus vaccine without having been proved to be definitely gonococcal.

SECTION OF STATE MEDICINE.

President—M. J. NOLAN, L.R.C.P.I.

Sectional Secretary—W. A. WINTER, M.D., F.R.C.P.I.

Friday, April 11, 1913.

DR. T. P. C. KIRKPATRICK in the Chair.

Return Cases of Scarlatina.

DR. J. MARSHALL DAY read a paper on the above. [This paper will be found at page 329.]

THE CHAIRMAN said that the paper was one of importance to every physician who had charge of cases of scarlatina.

The form of scarlatina experienced in Dublin recently was mild, and there appeared to be a certain amount of laxity with regard to the treatment and management of patients as compared with twenty years ago, yet the seriousness of the disease is often brought home to us through its many complications, and the problem of the treatment and management of it must always remain of first importance since it incapacitates the individual for a considerable period. Personally, he had always experienced the greatest difficulty in forming any estimation as to when a patient was free from the disease, and he did not think that this question would ever be satisfactorily settled until the specific cause of the disease can be ascertained.

The rule that he usually acted upon was to isolate patients for at least six weeks, no matter how well they appeared, and if at the end of that time there was any abnormal discharge from any part of the body he would consider the patient infectious as long as the discharge continued. The old idea that the desquamated epithelium was infectious he thought was not correct, as after the patient had been treated with antiseptics he considered it unlikely that any infection would remain in the epidermis.

DR. DELAHAYDE did not agree with Dr. Day that the breath conveyed infection, and he considered six weeks scarcely sufficient to free a patient from infection.

DR. COPE recalled a case of a little boy, a patient of his, who had been in hospital for six or seven weeks, and after being discharged went away to friends for a fortnight before returning to his family; yet on his return home his little sister developed scarlatina. He had ascertained that the little boy and girl had slept in the one bed on one occasion some two months after the boy's discharge from hospital. Whether this might be looked upon as a return case he did not know. He also gave another instance of a doubtful return case of which he had experience.

DR. CROFTON said that when practising in England he had experienced two severe epidemics of scarlet fever, and the rules carried out were somewhat similar to those indicated by Dr. Kirkpatrick, and he did not meet with a single return case.

As to whether the cause of the disease was known or not was a moot point, but it was, he thought, known that the complications gave a culture of streptococcus.

DR. MATSON said that the great trouble met with in cases of scarlatina was that if there was any sort of peeling going on when the patient was discharged it would be interpreted by the layman as a source of infection, and the result was that patients had to be kept in hospital often as long as two and a half months.

He considered that there was a great deal in what Dr. Day said regarding infection by the breath.

DR. WINTER referred to a report by Dr. Milne, the Medical Officer of Dr. Barnardo's Homes, who was a very strong advocate of local treatment, his method being to carefully swab the throat and syringe the nose with antiseptics and to anoint the body with either carbolic or eucalyptus oil, and he claimed that none of the patients so treated ever conveyed the infection to others. So confident was the Medical Officer of Dr. Barnardo's Homes as to the efficiency of this treatment that he was wont to have his operation cases side by side with his scarlatina cases in hospital, and he claimed that the infection never spread. Dr. Winter said that he had opportunities of trying this treatment with apparent success.

DR. O'FARRELL said the question about discharge interested him, as he had recently met with two cases of diphtheria in which he got bacilli from the nose and ear. It

occurred to him that two months seemed a long time to keep a person in for discharge from the ear. He inquired if Dr. Day had experience of vaccine treatment in cases of discharge from the ears. He did not consider that the ordinary case of scarlatina carried infection in the breath.

DR. DAY, replying to the remarks, said he never believed in the early infection theory. There was little doubt that persons working in diphtheria wards carried infection in their breath. He thought it probable that those breathing a diphtheria or scarlatina atmosphere are likely to suck in a certain amount of infection to the lungs. He did not place much reliance on the six weeks' isolation. He tried a good many cases with vaccines, and in some cases the method acted wonderfully, but in others it did not seem to make the slightest improvement. He considered that scarlatina was not a mono-infection. He had always held that a great many of the cases met with have diphtheria mixed with scarlatina. The reason for keeping children in hospital so long for ear discharge is that they may be properly treated.

A Method of Registering Hospital Cases.

DR. T. T. O'FARRELL pleaded for a uniformity in, and combination of, the valuable statistical material obtainable from Dublin hospitals. He then went on to describe the method adopted at St. Vincent's Hospital, which did not claim to be original or altogether perfect, but which was found to work satisfactorily.

The method is based chiefly on the card-indexing system, and the working of the details is distributed over a number of people, the amount of work for each individual being small; the Registrar's work being confined to keeping the admission and discharge book, filing the case sheets and cards, and at the end of the year drawing up a digest of the cases in an Analysis Book and bringing out the Final Report.

The details of the method are briefly as follows:—

(1) Cases are divided into males and females, the method of registration for each being the same.

(2) Each patient on admission is provided with the usual history sheets, charts, &c., together with a "coloured card"—red for males and blue for females.

(3) At the end of each week the "coloured cards" of each new patient, containing preliminary details, are sent to the

Registrar, who copies them into the admission and discharge book. He then returns the card, having given it its registration number, to the ward, where it remains with the patient's other notes.

(4) At the termination of each case, all the notes are completed and sent up to the Registrar.

(5) The Registrar then, by referring to the registration number, finds each case in the admission and discharge book, looks over the notes, enters the date of discharge, diagnosis, date of operation, if any, and result in the book, together with any short comment necessary in the observations column. He also fills in the number of the disease as it appears in the College of Physicians' Nomenclature of Diseases (a point which facilitates the drawing up of the final report).

(6) The Registrar then files the charts and coloured cards as follows:—(a) History sheets and other notes according to registration number in serial order in batches of ten, each batch being enclosed in an open, stiff paper pocket, special indicators of a remarkable colour being placed at the hundreds intervals; (b) the "coloured cards" are filed alphabetically according to the surname of the patient.

Both these files are in the form of drawers in a cabinet, and worded according to the card-indexing system. At the end of the year these files are cleared, the contents being placed in boxes, numbered according to year, and stored on shelves in an easily accessible place.

(7) At the end of the year the "analysis book" is drawn up, which is a rearrangement of the cases according to disease.

The Register number of each case is marked down so that all the cases of any one disease treated can be seen at a glance and their case sheets easily referred to if required.

(8) The Final Report is drawn up from the Analysis Book, the total number of cases of each disease, with their results, being set down.

DR. KIRKPATRICK said that seldom had a Section of the Academy listened to a paper so full of interest. It had always been a matter of regret that the clinical material available in Dublin is not utilised more fully for research purposes. Every hospital had a method of case-taking, and some

method of filing records such as that introduced by Dr. O'Farrell would be invaluable owing to the way in which the information is stored for reference. Such a system would be a distinct gain to the Dublin Medical School. An advantage of the system was that the work is distributed over a number of individuals, although, of course, the heaviest portion would come on the Registrar. There was a difficulty to be overcome—viz., a uniform classification of diseases. He referred to the publication between 1819 and 1830 of a Joint Hospital Report by the Dublin Hospitals, and suggested that the revival of such a report would do much to help the Dublin School of Medicine. He recommended the paper for the serious consideration of the hospital staffs of the Dublin hospitals.

DR. NEILL said he thought that the system which had been explained would be found useful even to the general practitioner for recording his cases. He suggested that the records of temperature and pulse might be kept on the same chart by using different colours.

DR. DAY mentioned that he had found the greatest difficulty in getting students to take notes of cases, and he thought that case-taking was not a strong point in Dublin. He considered that Dr. O'Farrell's system afforded very great facility for looking up old cases.

DR. O'KELLY said that one of the things from which they suffered in Dublin was that the hospitals were too large, and it was, therefore, very difficult to fully record cases. He referred to the system adopted of recording cases in American hospitals, where elaborate reports on each case are filed for reference.

DR. MATSON suggested that the duties of registrar to a hospital could best be performed by a medical man, as he would be able to judge if the records were deficient, and could take steps to have any missing details supplied by the person responsible for the omissions.

DR. CAHILL considered that the difficulty of keeping elaborate records in Dublin hospitals was a question of finance. He thought if hospitals could afford to pay for the work it would be done. He considered Dr. O'Farrell's system useful for private practice.

DR. O'FARRELL, in replying to the remarks, said he had little doubt that it was advisable that a medical man should

supervise the registration. He considered Dr. Neill's suggestion as to the keeping of temperature and pulse on the same chart an excellent one. He pointed out that in gynæcological cases it was very important to record full information of operations, as in such cases very little information could be afterwards obtained from a scar. Referring to the size of the hospitals, he mentioned that some of the largest London hospitals had a most elaborate registration system.

HISTORICAL MEDICAL MUSEUM.

THE Historical Medical Museum, organised by Mr. Henry S. Wellcome, which is to be opened in London towards the end of June, will include some objects of exceptional historical medical interest. An important exhibit in the science section will be a large collection of the original apparatus used by the famous Galvani in making his first experiments in galvanism in the eighteenth century. A remarkable collection of votive offerings for health will be exhibited. The custom of presenting these offerings in cases of sickness is a very ancient one, and the collection that will be shown is probably the finest ever got together. It will include Greco-Roman votive offerings of special anatomical and pathological interest in silver, bronze, marble and terra cotta, together with a number of similar objects used for the same purpose in mediæval and modern times. Ancient microscopes and optical instruments, gathered from all quarters of Europe, will form another important feature and a selection of surgical instruments used by famous surgeons when operating on historical personages is promised. The collection of amulets and charms connected with English folk-medicine will be very complete, and will constitute an exhibit of more than ordinary interest. A fine collection of early medical medals and coins from the Greco-Roman period, ancient manuscripts and early printed medical books will also be shown, together with many other objects of interest to medical and scientific men.

SANITARY AND METEOROLOGICAL NOTES.

VITAL STATISTICS

For four weeks ending Saturday, April 19, 1913.

IRELAND.

THE average annual death-rate represented by the deaths—exclusive of deaths of persons admitted into public institutions from without the respective districts—registered in the week ended April 19, 1913, in the Dublin Registration Area and the twenty-six principal provincial Urban Districts of Ireland was 20.9 per 1,000 of their aggregate population, which for the purposes of these returns is estimated at 1,199,180. The deaths registered in each of the four weeks of the period ending on Saturday, April 19, and during the whole of that period in certain of the districts, alphabetically arranged, correspond to the following annual rates per 1,000 :—

COUNTY BOROUGH, &c.	Week ending				Average Rate for 4 weeks
	Mar. 29	April 5	April 12	April 19	
27 Town Districts	23.8	23.3	22.5	20.9	22.6
Dublin Reg. Area ...	24.2	27.9	27.2	24.1	25.8
Dublin City	25.0	28.1	29.9	25.2	27.0
Belfast	24.5	21.2	19.6	16.9	20.6
Cork	22.4	18.4	24.5	22.4	21.9
Londonderry	20.3	22.9	14.0	12.7	17.5
Limerick	27.1	14.9	19.0	29.8	22.7
Waterford	32.3	24.7	20.9	11.4	22.3

The deaths (excluding those of persons admitted into public institutions from without the respective districts) from certain epidemic diseases registered in the 27 districts during the week ended Saturday, April 19, 1913, were equal to an annual rate of 1.9 per 1,000. Among the 128 deaths from all causes

for Belfast are 4 from measles, 3 from scarlet fever, and one from diphtheria. Two of the 10 deaths from all causes for Londonderry are from diphtheria. One of the 6 deaths for Waterford is from whooping-cough. Among the 10 deaths from all causes for Newry are 2 from measles. Ten deaths from measles are among the 14 deaths from all causes for Wexford, and the 6 deaths from all causes for Tralee include one death from this disease.

DUBLIN REGISTRATION AREA.

The Dublin Registration Area consists of the City of Dublin, as extended by the Dublin Corporation Act, 1900, together with the Urban Districts of Rathmines, Pembroke, Blackrock and Kingstown. The population of this area is 403,000; that of the City being 308,187, Rathmines 38,769, Pembroke 29,942, Blackrock 9,161, and Kingstown 16,941.

In the Dublin Registration Area the births registered during the week ended April 19 amounted to 210—109 boys and 101 girls—and the deaths to 201—98 males and 103 females.

DEATHS.

The registered deaths, omitting the deaths (numbering 15) of persons admitted into public institutions from localities outside the Area, represent an annual rate of mortality of 24.1 per 1,000 of the population. During the sixteen weeks ending with Saturday, April 19, the death-rate averaged 23.1, and was 2.1 below the mean rate for the corresponding portions of the 10 years 1903–1912.

The total deaths registered, numbering 201, represent an annual rate of 26.0 per 1,000. The annual rate for the past sixteen weeks was 24.5 per 1,000, and the average annual rate for the corresponding periods of the past ten years was 26.4 per 1,000 of the mean population for all deaths registered.

The total deaths from all causes included 2 from diphtheria, 1 from measles, 1 from typhus, 5 from whooping-cough, 4 from influenza, and 8 deaths of children under two years of age from diarrhoea and enteritis.

In each of the three preceding weeks, deaths from diphtheria were 6, 5, and 4; deaths from typhus were 0, 1, and 0; deaths from measles were 0, 0, and 0; deaths from whooping-cough were 7, 2, and 3; deaths from influenza were 6, 5, and 4;

and deaths of children under two years of age from diarrhoea and enteritis were 5, 7, and 6 respectively.

There were 33 deaths from tuberculous disease. This number includes 19 deaths from pulmonary tuberculosis, 4 from tubercular meningitis, 4 from abdominal tuberculosis, 3 from tuberculosis of joints, 2 from tuberculosis of other organs, and 1 from disseminated tuberculosis. In each of the three preceding weeks deaths from tuberculous disease numbered 29, 43, and 34.

Broncho-pneumonia caused 6 deaths, and pneumonia (type not distinguished) caused 6 deaths.

Organic diseases of the heart caused the deaths of 14 persons, and 20 deaths from bronchitis were recorded.

Six deaths were caused by cancer.

The deaths of 6 infants under one year of age were caused by convulsions, those of 5 infants by congenital debility, and those of 5 through premature birth.

There were 4 accidental deaths.

In 9 instances the cause of death was "uncertified," there having been no medical attendant during the last illness. These cases include the deaths of 4 infants under one year of age, and the deaths of 3 persons aged 65 years and upwards.

Fifty-two of the persons whose deaths were registered during the week ended April 19 were under 5 years of age (31 being infants under one year, of whom 13 were under one month old), and 51 were aged 65 years and upwards, including 40 persons aged 70 and upwards. Among the latter were 20 aged 75 years and upwards, of whom 2 (females) were stated to have been aged 90 and 92 years respectively.

STATE OF INFECTIOUS DISEASE IN THE DUBLIN REGISTRATION AREA AND IN BELFAST.

The usual returns of the number of cases of infectious diseases notified under the "Infectious Diseases (Notification) Act, 1889," and the "Tuberculosis Prevention (Ireland) Act, 1908," as set forth in the following table, have been furnished by Sir Charles A. Cameron, C.B., M.D., Medical Superintendent Officer of Health for the City of Dublin; by Mr. Fawcett, Executive Sanitary Officer for Rathmines and Rathgar Urban District; by Mr. Manly, Executive Sanitary Officer for Pembroke Urban District; by Mr. Heron, Executive Sanitary

Officer for Blackrock Urban District; by the Executive Sanitary Officer for Kingstown Urban District; and by Dr. Bailie, Medical Superintendent Officer of Health for the City of Belfast.

TABLE SHOWING THE NUMBER OF CASES OF INFECTIOUS DISEASES notified in the Dublin Registration Area (viz.—the City of Dublin and the Urban Districts of Rathmines and Rathgar, Pembroke, Blackrock, and Kingstown), and in the City of Belfast, during the week ended April 19, 1913, and during each of the preceding three weeks. An asterisk (*) denotes that the disease in question is not notifiable in the District.

CITIES AND URBAN DISTRICTS	Week ending	Measles	Rubella, or Epi- demic Rose Rash	Scarlet Fever	Typhus	Relapsing Fever	Diphtheria	Membranous Group	Pyrexia (origin uncertain) ^a	Enteric or Typhoid Fever	Erysipelas	Puerperal Fever	Whooping-cough	Cerebro-spinal Fever	Tuberculous Phthisis (<i>Phtisis</i>)	Acute Polio- myelitis	Total
City of Dublin	Mar. 29	*	*	*	1	-	10	-	1	2	-	-	*	-	12	-	34
	April 5	*	*	*	6	-	8	-	1	1	9	-	*	-	7	-	37
	April 12	*	*	*	7	-	9	-	1	4	9	-	*	-	16	-	48
	April 19	*	*	*	9	-	8	-	1	4	4	-	*	-	7	-	34
Rathmines and Rathgar Urban District	Mar. 29	*	*	*	-	-	2	-	-	-	-	-	*	*	*	*	2
	April 5	*	*	*	1	-	2	-	-	-	1	-	*	*	*	*	7
	April 12	*	*	*	1	-	3	-	-	-	-	-	*	*	*	*	4
	April 19	*	*	*	-	-	-	-	-	-	-	-	*	*	*	*	-
Pembroke Urban District	Mar. 29	-	-	1	-	-	2	-	-	-	-	-	-	*	4	*	7
	April 5	4	-	-	-	-	-	-	-	-	-	-	3	*	-	*	7
	April 12	-	-	-	-	-	-	-	-	1	-	-	-	*	-	*	1
	April 19	2	-	-	-	-	1	-	-	-	-	-	1	*	-	*	4
Blackrock Urban District	Mar. 29	*	*	2	-	-	26	-	-	-	-	-	*	-	*	*	28
	April 5	*	*	1	-	-	6	-	-	-	-	-	*	-	*	*	7
	April 12	*	*	-	-	-	1	-	-	-	-	-	*	-	*	*	1
	April 19	*	*	-	-	-	-	-	-	-	-	-	*	-	*	*	-
Kingstown Urban District	Mar. 29	*	*	1	-	-	1	-	-	-	-	-	*	*	3	*	5
	April 5	*	*	1	-	-	-	-	-	-	-	-	*	*	1	*	2
	April 12	*	*	-	-	-	-	-	-	-	-	-	*	*	-	*	-
	April 19	*	*	1	-	-	-	-	-	-	-	-	*	*	-	*	1
City of Belfast	Mar. 29	*	*	20	-	-	8	-	-	1	5	-	*	*	6	*	40
	April 5	*	*	37	-	-	5	-	3	2	6	-	*	*	13	*	66
	April 12	*	*	25	-	-	8	-	-	-	5	-	*	*	9	*	47
	April 19	*	*	23	-	-	7	-	1	3	1	1	*	*	8	*	44

^a Continued Fever.

CASES OF INFECTIOUS DISEASES UNDER TREATMENT IN DUBLIN HOSPITALS.

During the week ended April 19, 1913, 11 cases of measles were admitted to hospital, 3 were discharged, and 16 cases remained under treatment at the close of the week. In the three preceding weeks such cases were 7, 7, and 8 respectively.

Sixteen cases of scarlet fever were admitted to hospital, 23 were discharged, there was one death, and 77 cases remained under treatment at the close of the week. This number is ex-

clusive of 13 convalescent patients who remained under treatment at Beneavin, Glasnevin, the Convalescent Home of Cork Street Fever Hospital, Dublin. At the close of the three preceding weeks the cases in hospital were 98, 88, and 85 respectively.

Thirteen cases of diphtheria were admitted to hospital, 6 were discharged, and there were 3 deaths. The cases in hospital, which at the close of the three preceding weeks numbered 52, 49, and 55 respectively, were 59 at the close of the week.

Three cases of enteric fever were admitted to hospital, 6 were discharged, and 27 cases remained under treatment in hospital at the close of the week, the respective numbers in hospital at the close of the three preceding weeks being 32, 28, and 30.

Two cases of typhus were discharged from hospital during the week, there was one death, and 10 cases remained under treatment at the close of the week.

In addition to the above-named diseases, 13 cases of pneumonia were admitted to hospital, 5 were discharged, there was one death, and 40 cases remained under treatment at the end of the week.

ENGLAND AND SCOTLAND.

The mortality in the week ended Saturday, April 19, in 96 large English towns (including London, in which the rate was 16.4) was equal to an average annual death-rate of 15.8 per 1,000 persons living. The average rate for 16 principal towns of Scotland was 17.7 per 1,000, the rate for Glasgow being 17.3, and that for Edinburgh 16.3.

INFECTIOUS DISEASE IN EDINBURGH.

The Registrar-General has been favoured by A. Maxwell Williamson, M.D., B.Sc., Medical Officer of Health for Edinburgh, with a copy of his Return of Infectious Diseases notified during the week ended April 19. From this Report it appears that of a total of 50 cases notified, 26 were of phthisis, 15 of scarlet fever, 5 of diphtheria, 2 of erysipelas, 1 of cerebro-spinal fever, and 1 of enteric fever. Among the 390 cases of infectious diseases in hospital at the close of the week were 123 cases of scarlet fever, 113 of phthisis, 47 of measles, 52 of whooping-cough, 26 of diphtheria, 4 of erysipelas, 7 of chicken-pox, and 7 of enteric fever.

METEOROLOGY.

Abstract of Observations made in the City of Dublin, Lat. 53° 20' N., Long. 6° 15' W., for the Month of April, 1913.

Mean Height of Barometer, - - -	29.802 inches.
Maximal Height of Barometer (4th, at 9 a.m.),	30.358 „
Minimal Height of Barometer (26th, at 4 p.m.),	28.800 „
Mean Dry-bulb Temperature, - - -	46.5°.
Mean Wet-bulb Temperature, - - -	43.8°.
Mean Dew-point Temperature, - - -	41.0°
Mean Elastic Force (Tension) of Aqueous Vapour,	.257 inch.
Mean Humidity, - - - -	81.1 per cent.
Highest Temperature in Shade (on 30th), -	58.2°.
Lowest Temperature in Shade (on 26th), -	35.7°.
Lowest Temperature on Grass (Radiation) (20th)	32.9°.
Mean Amount of Cloud, - - - -	57.0 per cent
Rainfall (on 19 days), - - - -	2.764 inches.
Greatest Daily Rainfall (on 29th), - - -	.852 inch.
General Directions of Wind, - - - -	W., N.E.

Remarks.

A generally favourable month—without extremes of temperature. The first 10 days were dry except for copious showers on the 2nd (.121 inch), and during this period S.E. to N.E. and N. winds prevailed. The diurnal range of temperature in this fine spell was large—on the 8th the thermometer rose from 40.2° to 58.1°. On the 10th a broken period set in, lasting to the 20th. Rain fell daily to a larger or smaller amount, and prevalent S.W. or W. winds blew freshly at times. The 21st and two following days were very fine and dry, but the weather again became unsettled on the 24th and so continued to the close. Quite suddenly on the afternoon of the 25th snow and sleet took the place of rain and next morning the Dublin and Wicklow mountains were deeply covered with snow. On Tuesday, the 29th, a rain-storm occurred in Ireland, and a severe thunderstorm raged in the southern and south-eastern parts of England, where the day had been warm—69° in the screen being reached at Camden Square, London, N.W. On that same day the thermometer rose in the shade to 77° at Frankfûrt, 79° in Brussels, 80° in Paris, and 82° in Berlin. At Spitzbergen the

temperature ranged on the 29th from -9° to $+12^{\circ}$. As regards atmospheric pressure, the barometer fell to 28.54 inches at Malin Head on the evening of the 26th. At that station it had been as high as 30.45 inches on the morning of the 4th, when an anticyclone in the north determined a cold N.E. wind in the British Isles.

In Dublin the arithmetical mean temperature (47.6°) was just equal to the average (47.6°). The mean dry-bulb readings at 9 a.m. and 9 p.m. were 46.5° . In the forty-nine years ending with 1913, April was coldest in 1879 (the cold year) (M. T. = 44.5°), and warmest in 1893 (M. T. = 51.4°). In 1912 the M. T. was 49.5° .

The mean height of the barometer was 29.802 inches, or 0.048 inch below the average value for April—namely, 29.850 inches. The mercury rose to 30.358 inches at 9 a.m. of the 4th, and fell to 28.800 inches at 4 p.m. of the 26th. The observed range of atmospheric pressure was, therefore, 1.558 inches.

The mean temperature deduced from daily readings of the dry-bulb thermometer at 9 a.m. and 9 p.m. was 46.5° , or 3.5° above the value for March, 1913. Using the formula, *Mean Temp.* = *Min.* + (*Max.* — *Min.*) $\times .476$, the value is 47.3° , or exactly equal to the average mean temperature for April, calculated in the same way, in the thirty-five years, 1871–1905, (47.3°). The arithmetical mean of the maximal and minimal readings was 47.6° , compared with a thirty-five years' (1871–1905) average of 47.6° . On the 30th the thermometer in the screen rose to 58.2° —wind, S.S.W.; on the 26th the temperature fell to 35.7° —wind, S.S.E. The minimum on the grass was 32.9° on the 20th. The mean maximal temperature was 53.4° , the mean minimum, 41.7° .

The rainfall was 2.764 inches, distributed over 19 days. The average rainfall for April in the thirty-five years, 1871–1905, was 1.940 inches, and the average number of rain-days was 16. The rainfall, therefore, and also the rain-days were considerably above the average. In 1877 the rainfall in April was very large—4.707 inches on 21 days. On the other hand, in 1873, only .498 inch was measured on 8 days. In 1912, 1.320 inches fell on only 7 days.

High winds were noted on 10 days, but reached the force of a gale only on the 25th. Hail fell on the 1st, 16th, 17th, 19th and 27th; sleet and snow on the 25th. The temperature never

rose above 60° in the screen. It failed to reach 50° on the 12th. It never fell to 32° in the screen, or below 32° on the grass. The mean lowest temperature on the grass was 38.4° , compared with 39.7° in 1912, 40.2° in 1911, 36.0° in 1910, 39.0° in 1909, 35.4° in 1908, 36.7° in 1907, 33.6° in 1906, 37.3° in 1905, 39.1° in 1904, 37.0° in 1903, 36.8° in 1902, 37.3° in 1901, and only 31.6° in 1887.

The rainfall in Dublin during the four months ending April 30th amounted to 11.097 inches on 74 days, compared with only 4.700 inches on 59 days in 1911, 10.119 inches on 68 days in 1912, an average of 8.338 inches on 69 days in the first decade of the twentieth century, and a thirty-five years' (1871–1905) average of 8.070 inches on 66 days.

At the Normal Climatological station in Trinity College, Dublin, Mr. C. D. Clark reports that the mean height of the barometer was 29.829 inches, the range of atmospheric pressure being from 30.35 inches at 9 a.m. of the 4th to 29.08 inches at 9 p.m. of the 26th. The mean value of the readings of the dry-bulb thermometer at 9 a.m. and 9 p.m. was 47.1° . The arithmetical mean of the daily maximal and minimal temperatures was 46.7° . The screened thermometers rose to 60° on 30th, and fell to 32° on the 13th. On the 7th the grass minimum was 25° . Rain fell on 17 days to the amount of 2.67 inches, the greatest fall in 24 hours being .82 inch on the 29th. The duration of bright sunshine, according to the Campbell-Stokes recorder, was 126.0 hours, of which 10.5 hours occurred on the 19th. The mean daily duration of sunshine was 4.2 hours. The mean temperature of the soil at 9 a.m. was 47.2° at a depth of 1 foot; at a depth of 4 feet it was 46.6° .

Captain Edward Taylor, D.L., gives the rainfall at Ardgillan, Balbriggan, Co. Dublin, as 3.33 inches on 17 days, the rainfall being 1.39 inches above, and the rain-days 2 above, the average. The heaviest fall in 24 hours was .50 inch on the 29th. The rainfall from January 1st equals 11.09 inches on 70 days—that is 2.74 inches and 4 days over the average. The thermometers in the screen rose to 57.7° on the 30th, and fell to 31.9° on the 26th. Heavy snow fell from 6 15 p.m. to 8 p.m. on the 25th.

Mr. T. Bateman, of The Green, Malahide, Co. Dublin, returns the rainfall at 2.81 inches on 18 days. The greatest fall in 24 hours was .555 inch on the 29th. Snow fell on the

25th. The mean shade temperature was 44.3° , the extremes being—highest, 57° on the 30th; lowest, 31° on the 19th.

At the Ordnance Survey Office, Phoenix Park, Dublin, rain fell on 16 days to the amount of 2.750 inches, the greatest measurement in 24 hours being .840 inch on the 29th. The total amount of bright sunshine was 137.5 hours, of which 11.4 hours fell on the 19th, the brightest day of the month.

At Cheeverstown Convalescent Home for Little Children, Clondalkin, Co. Dublin, Miss C. Violet Kirkpatrick recorded 3.36 inches of rain on 18 days. The largest fall in 24 hours was .91 inch on the 29th.

At 21 Leeson Park, Dublin, Dr. Christopher Joynt, F.R.C.P.I., measured 2.608 inches on 17 days, the largest amount recorded in 24 hours being .870 inch on the 29th.

Dr. Arthur S. Goff reports that the rainfall at Belfort House, Dundrum, Co. Dublin, was 3.57 inches on 19 days. The greatest daily rainfall was .95 inch on the 29th. The mean shade temperature was 47.4° , compared with a ten years' (1901–1910) average of 46.6° . The thermometric range was from 60° on the 8th to 35° on the 26th. Hail showers fell on the 15th and 19th; snow on the 25th.

Mr. George B. Edmondson recorded a rainfall of 3.66 inches on 18 days at Manor Mill Lodge, Dundrum, Co. Dublin. The greatest fall in 24 hours was .93 inch on the 29th. The thermometer in the screen ranged between 61° on the 23rd and 34° on the 26th. The mean temperature of the month was 46.5° .

At Marino, Killiney, Co. Dublin, Mr. W. McCabe, the observer for the Right Hon. L. A. Waldron, registered 2.50 inches of rain on 12 days. The largest fall in 24 hours was .95 inch on the 29th.

At the Sanatorium of the Dublin Joint Hospital Board, Crooksling, Co. Dublin, Dr. A. J. Blake, the Resident Medical Superintendent, reports a rainfall of 3.81 inches on 17 days. The largest measurement in 24 hours (from 9 a.m. to 9 a.m.) was 1.01 inches on the 29th. Snow fell to the depth of about 2 inches on Friday, the 25th.

Dr. John H. Armstrong reports that at Coolagad, Greystones, Co. Wicklow, the rainfall amounted to 3.83 inches on 17 days. The heaviest fall in 24 hours was .81 inch on the 29th. Hail fell on the 2nd, 16th and 25th; sleet and snow on the 25th. The total rainfall in 1913, up to April 30th, was 18.04 inches on 78 days, compared with 6.07 inches on 56 days in the

corresponding period of 1911, and 19.08 inches on 74 days in 1912. Two swallows were seen on the 3rd.

Mrs. Sydney O'Sullivan recorded 3.29 inches of rain on 18 days at Auburn, Greystones, the largest measurement in 24 hours being .77 inch on the 29th.

Dr. Charles D. Hanan, M.D., Resident Medical Officer at the Royal National Hospital for Consumption, Newcastle, Co. Wicklow, reports that the rainfall at that place was 3.51 inches on 15 days, the maximal fall in 24 hours being .75 inch on the 29th. The mean temperature of the air was 44.9° , the thermometer in the screen having risen to 58° on the 22nd, and fallen to 34° on the 12th, 25th and 28th. The mean maximal temperature was 50.3° , the mean minimum being 39.5° .

At the Rectory, Dunmanway, Co. Cork, the Rev. Arthur Wilson, M.A., measured 5.94 inches of rain on 19 days. The rainfall was 1.56 inches more than the average. The heaviest falls were on the 15th (1.12 inches) and 23rd (.83 inch). There was no rain from the 3rd to the 12th, except .01 inch on the 4th. The weather was very unsettled from the 14th to the end of the month. Sleet and snow fell at 11 a.m. of the 25th. The rainfall for the 4 completed months of 1913 equals 29.61 inches on 86 days, the average for the same period in the last 8 years being 19.85 inches.

AMERICAN PROCTOLOGIC SOCIETY.

THE Fifteenth Annual Meeting of this Society will be held at Minneapolis, Minn., on June 16 and 17, 1913. The headquarters and place of meeting will be the Hotel Radisson, Seventh Street, near Nicolet Avenue. The Profession is cordially invited to attend all meetings. The following have been appointed officers for the Session:—President, Louis J. Hirschman, M.D.; Vice-President, Alois B. Graham, M.D.; Secretary-Treasurer, Lewis H. Adler, Jr., M.D. Executive Council—John L. Jelks, M.D., Chairman; Louis J. Hirschman, M.D.; J. Rawson Pennington, M.D.; Lewis H. Adler, Jr., M.D. Stenographer, Miss Lilian Ross Moyle, St. Louis, Mo. The subject of the Annual Address of the President will be "Proctology and Procto-Enterology." The preliminary programme contains the titles of twenty papers which will be read at the meeting.

PERISCOPE.

ROYAL COLLEGE OF SURGEONS OF EDINBURGH.

AT a meeting of the College, held on Tuesday, May 13, the following gentlemen, having passed the requisite examinations on 10th of January last, were admitted Fellows:—Fergus Armstrong, M.D., Univ. Edin., Ecclefechan, Dumfriesshire; Charles Botterill Baxter, M.B., Ch.B., Edin, M.R.C.S. Eng., L.R.C.P. Lond., Reading; George Noel Braham, L.R.C.S.E. (Triple Qual.), Southampton; Rex Carrington Brewster, M.R.C.S., Eng., L.R.C.P. Lond., Edinburgh; Henry Anstey Cookson, M.B., Ch.B., Univ. Edin., Cheltenham; Frank Holt Diggle, M.B., Ch.B. Vict. Univ. Manc., M.R.C.S. Eng., L.R.C.P. Lond., Manchester; Keith Buchanan MacGlashan, M.D. Univ. Edin., Edinburgh; Frank Gerald Ralphs, M.B., Ch.B. Vict. Univ. Manc., Cheshire; Francis Arthur Scannell, M.B., Ch.B. Univ. New Zeal., Timaru, New Zealand; Ralph Leicester Scott, M.B., Ch.B. Univ. Edin., Edinburgh; Alexander Dron Stewart, M.B., Ch.B. Univ. Edin., Capt. Indian Medical Service; and Arthur Charles Thomson, M.B., Ch.B., Univ. New Zeal., Edinburgh. The Bronze Medal and Books presented to the College by the late Colonel William Lorimer Bathgate, in memory of his late father, William McPhune Bathgate, F.R.C.S.E., Lecturer on *Materia Medica* in the Extra-Academical School, were awarded, after the usual competitive written examination in *Materia Medica*, &c., held for the Session 1912-1913, to Mr. George Thomson Mowat, 40 Marchmont Crescent, Edinburgh.

FOR THE WELFARE OF INFANCY.

ARRANGEMENTS are now well in hand for the English-speaking Conference on Infant Mortality, to be held at Caxton Hall, Westminster, on August 4th and 5th. It is under the immediate patronage of the King and Queen, and will be presided over by Mr. John Burns. Lady Aberdeen, Mr. Pease, Sir George Newman, and Dr. Arthur Newsholme are among the Chairmen of the various Sessions, into which the two sections—administrative and medical—are divided. Papers will be read by experts from the United Kingdom, the United States, and the Colonies on many aspects of the following questions:—The responsibility of central and

local authorities in the matter of infant and child hygiene; the necessity for special education in infant hygiene; medical milk problems, the administrative control of the milk supply, and ante-natal hygiene. The United States and a large number of Colonial Governments will be officially represented, and the attendance generally promises to be very large. The British railways and steamship companies with services to the Colonies and to the States have all granted special travelling facilities, particulars of which are set forth in the detailed programme, which may now be obtained from the Secretary of the National Association for the Prevention of Infant Mortality at 4 Tavistock Square, London, W.C. The Corporations of Liverpool and Glasgow have each given a donation of £50 towards the expenses of the Conference, that of London has given £25, and many other towns are sending smaller sums in proportion to their population.

ACUTE INFECTIOUS BRONCHITIS.

ACUTE bronchitis is grave when the inflammation extends to the small bronchial tubes and when it assumes an infectious character. We will rapidly pass in review the causes which make capillary bronchitis peculiarly dangerous, or the differences, other than those of calibre, existing between the primary divisions and the terminal ramifications of the bronchial tubes. The walls of the primary tubes are thicker and their epithelium and vibratory cilia offer an impediment to the invasion of microbes (*streptococcus*, *pneumococcus*, the *bacillus* of Pfeiffer, *staphylococcus*, *colon bacilli*, and so forth), their mucous glands, with their rich enervation, allow of their expelling, by reflex or voluntary expectoration, foreign bodies, endogenous or exogenous. We all know their means of defence. On the other hand, the finer branches of the respiratory tree possess no ciliated epithelium, no glands, no reflex sensibility to reject secretions; their walls are delicate, and are a slender protection to the pulmonary cells in their vicinity. Their means of defence are feeble. Infectious bronchitis, carefully studied by Huchard, may be primary; but it is more frequently secondary, following on an attack of pneumonia, influenza, measles, whooping-cough, diphtheria, or tuberculosis. Then an ordinary attack of bronchitis develops symptoms of great gravity from its extension to the terminal tubes, which by

reason of their small calibre (easy of obstruction, always threatened with asphyxia). In the infectious type of bronchitis the inflammation cannot so affect the larger tubes, therefore its symptoms are ever those of the capillary form, producing a subasphyxial condition, which, with the general depression of the patient, calls for a grave prognosis. The signs furnished by auscultation give but little idea of the serious state of the patient; some subcrepitant râles, dry or moist, heard in the course of short and imperfect inspirations. The expectoration is ordinarily scanty. The temperature is sometimes slightly raised, and sometimes normal, and may occasionally become sub-normal. The subasphyxial state to which we have referred is due to a mucopurulent exudation in which are to be found staphylococcus, streptococcus, pneumococcus (these are the pneumococci which we meet with in the most serious forms); this exudate fills and obstructs the bronchi. A paretic state of these latter, a sort of bronchoplegia, contributes to the production of subasphyxia, which is recognised as causing sometimes a considerable fall in temperature. These are the characters of the secretion by which we establish the diagnosis. The secretion is the enemy. Against it all the energy of the physician must be directed. We cannot ignore it; therefore, we must combat the cough by opium and its derivatives, antisepticise the broncho-pharyngeal region, supply the patient with medicated inhalations, have recourse, in case of collapse, to warm baths, &c. But above all we should endeavour to modify the exudate, liquefy it to facilitate its expectoration, and disinfect it to attenuate its toxicity. We do not say that the means at our disposal admit of wholly altering its character, but we should make it as innocuous as possible and diminish to the utmost its infectious property. To effect this we have the balsams which are ready at hand and at the disposal of all physicians, and of the balsams we find creosote, balsam of tolu, and tar the most suitable. They are eliminated by the lungs, modifying the secretions, causing them to lose their mucopurulent character, and to become more fluid; under their influence the bronchi are disinfected, the epithelium becomes healthy, and the erosions and alterations in the mucous lining disappear. But it is necessary to employ a creosote of great purity, and with it may be given the balsam of tolu and tar. This combination causes the drugs to be better tolerated, and singularly augments their thera-

peutic power. The combination is frequently prescribed in the form of Livonienne's drops, or as capsules. Livonienne's capsules, according to V. Gardette (*Formulaire des Spécialités Pharmaceutiques*), contain beechwood creosote, 0.05 centig.; Norway tar, 0.075 millig.; balsam of tolu, 0.075 millig. in each capsule. Two capsules are directed to be taken with each of the two principal meals.—*Gazette des Hôpitaux (Paris)*. 86-ième Année. No. 7.

POST-OPERATIVE RESULTS OF NEPHRECTOMIES.

M. BAZY (*Académie de Médecine*) reports, from his experience, that patients who have had a kidney excised, will, the other kidney being healthy, enjoy as good health as if they possessed two kidneys. The function of the gland being carried on normally after the removal of its fellow, and after important operations, demonstrate the integrity of the function. Eleven years after a nephrectomy for a tumour, M. Bazy removed the uterus and its appendages from a female who bore the operation as well as if she had not had a kidney excised. He classifies operable cases in three groups—tumours, tuberculous, suppurative. First group.—The ablation of tumours. These cases give the most favourable results; the patients being in health fourteen years, eleven years, eight years, five years and three years; he does not include the more recent cases. Second group.—Tuberculous kidneys. In these cases the success largely depends on the state of the bladder: the bladder being healthy, the result is favourable; those in whom the bladder is affected are benefited more or less rapidly in proportion to the character and duration of the vesical lesion. Third group.—Suppurative kidneys. Nephrectomies for simple suppuration do well. After the operation both the albumen and pus disappear from the urine.—*Gazette des Hôpitaux*. 86-ième Année. No. 24. Feb. 27, 1913.

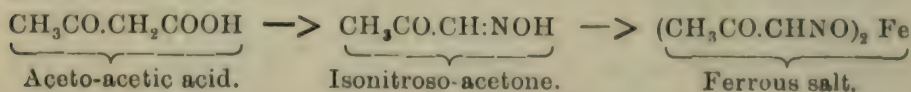
TREATMENT OF AMŒBIC DYSENTERY BY EMETINE.

M. CHAUFFARD, in a communication to the *Académie de Médecine* (Paris), tells of the good results obtained by him in some cases of amœbic dysentery by the subcutaneous injection of emetine. One of his successful cases was that of a patient who for five months was suffering from an hepato-bronchial fistula, and expectorated from 200 to 250 c.m. cubes of reddish pus; a dysenteric ulcer existed in the rectum, and the tem-

perature oscillated between 98.6° F. and 100.4° F. The general health was poor. A radiogram showed an opacity extending from the base of the right lung and blending with the shadow of the liver. From the 21st to the 26th of December the patient got six subcutaneous injections of 4 centigrammes each of the hydrochlorate of emetine. They were well borne, and caused no unpleasant effects. The expectoration, which was 200 cubic centimetres on the first day, fell to 150 cubic centimetres on the second day, to 60 on the third day, to 45 on the fourth; on the fifth day the patient expectorated but three times, and in a little time the expectoration completely ceased. During this time the temperature fell to normal and remained so. Leucocytes fell from 49,000 to 19,800, polynuclear cells from 77 to 63. The rectal ulcer cicatrised, and the base of the right lung cleared up.—*Gazette des Hôpitaux*. 86-ième Année. No. 24. Feb. 27, 1913.

A SIMPLE NEW TEST FOR ACETO-ACETIC ACID.

IN *The Lancet*, April 26, 1913, Mr. W. Holdsworth Hurtle, D.Sc. Lond., Lecturer on Chemistry, St. Bartholomew's Hospital, describes a new test, which is performed as follows:—To 10 c.c. of the urine add 2.5 c.c. of concentrated hydrochloric acid and 1 c.c. of a 1 per cent. solution of sodium nitrite; shake and allow to stand two minutes. Now add 15 c.c. of strong ammonia, followed by 5 c.c. of a 10 per cent. solution of ferrous sulphate or a solution of ferrous chloride of equivalent strength (2 gramm. of iron in 100 c.c.). Shake up, pour into a 50 c.c. Nessler glass, and allow to stand undisturbed. It is not advisable to filter. A beautiful violet or purple colour is produced. The reaction is a *slow one*, and the speed at which the colour develops depends on the concentration of the aceto-acetic acid in the urine; the colour deepens for several hours after its first appearance. The explanation of the test which Mr. Hurtle offers is that the aceto-acetic acid is converted by the nitrous acid into isonitroso-acetone, which forms a salt with the ammonia; the ferrous salt then produces a purple-coloured salt from the ammonia salt by double decomposition.



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